

# **OS/32 R06.2**

## **SOFTWARE PACKAGE**

### **REFERENCE DOCUMENT**

**Consists of Packaging Information For:**

<b>Magnetic Tape (800 BPI) Package</b>	<b>04-082M31R13</b>
<b>Disk (10Mb) Package</b>	<b>04-082M61R13</b>
<b>Magnetic Tape (1600 BPI) Package</b>	<b>04-082M71R13</b>
<b>Disk (16Mb) Package</b>	<b>04-082MD1R13</b>

# **PERKIN-ELMER**

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**Example:**

```
LO EDIT32
TASK EDIT32
ST
G OS62M95.LST
SAV PRINT DEVICE:
```

The user should check his configuration for the print device in use.

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## 1 PRODUCT IDENTIFICATION

Sales Order Number: S80-016  
Perkin-Elmer Part Number: 04-082  
Product Title: OS/32 R06-02 Software Package

## 2 GENERAL INFORMATION

This document describes the OS/32 R06-02 object package and installation procedures. Section 5 contains information on the documentation package, S80-016-BCM (04-082M99R13), Section 6 lists the object program components while Section 7 describes the unpackaging and installation procedures required to make OS/32 6.2 operational.

The revision level of each of the component programs is indicated in this document. In general, earlier revisions of these programs will not execute properly with OS/32 6.2.

Certain standard Perkin-Elmer software packages require revisions to execute properly within the OS/32 6.2 environment. The minimum revision level of these programs is given in Section 4 of this document. Again, the user is warned against executing an earlier revision of any of these programs within the OS/32 6.2 Operating System environment.

The major changes in OS/32 R06-02 Software Package are:

- o SPL/32
- o Bi-directional Input/Output Control (BIOC) CRT Driver
- o Virtual Task Manager (VTM) and Support
- o Enhanced Magnetic Tape Driver
- o Channel Manager Driver
- o Non-buffered Indexed Files
- o Extendable Contiguous Files
- o Extended file accounts support
- o Vertical Form Control (VFC) Support
- o LINK R01-00
- o SVC Enhancements
- o COPY/32 Enhancements

- o SPOOLER Enhancements
- o FASTBACK
- o PENnet Support
- o Utility Program Updates
- o Maintenance

A summary of the existing differences and required conversion activities is provided in Appendix C.

If there are any problems outstanding at the product release, a description of their symptoms and possible circumvention procedures are provided in Appendix E.

### 3 AVAILABLE PACKAGES

The OS/32 R06-02 Object Software Packages currently available are:

Order Number	Part Number	Package Description
S80-016-ABB	04-082M31R13	OS/32 R06-02 Software Object Package Functional Programs (9-track, 800 BPI magnetic tape), Reference Document and Documentation Package
S80-016-ABC	04-082M71R13	OS/32 R06-02 Software Object Package Functional Programs (9-track, 1600 BPI magnetic tape), Reference Document and Documentation Package
S80-016-ABE	04-082M61R13	OS/32 R06-02 Software Object Package Functional Programs (10Mb Disc), Reference Document and Documentation Package
S80-016-ABP	04-082MD1R13	OS/32 R06-02 Software Object Package Functional Programs (16Mb Disc), Reference Document and Documentation Package

#### Documentation Package

S80-016-BCM	04-082M99R13	OS/32 R06-02 Software Object Documentation Package
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#### 4 RELATED SOFTWARE

The software packages listed below must be of the proper revisions to execute within an OS/32 6.2 environment. The package number and minimum revision level of each is as indicated (although the current revision level may differ):

Software	Marketing Number	Software Package Number
MTM (R06-02)	S80-017	04-083 R07
COBOL	S90-217	04-076 R03
COBOL	S80-023	04-109 R00
BASIC II DBL PREC	S90-210	04-068 R02
BASIC II SNG PREC	S90-211	04-067 R02
2780/3780 RJE	S80-031	04-117 R02
HASP/32	S80-015	04-077 R01
RELIANCE	S80-025	04-110 R02
RELIANCE	S80-035	04-110 R03 (for Multi-drop)
PENnet	S80-051	04-166 R00

#### 5 DOCUMENTATION

The documentation package, S80-016-BCM (04-082M99R13), contains the following user manuals which describe the operating system and related utility programs:

Publication Title	Part Number	
<b>Operations:</b>		
OS/32 Operator Reference Manual	48-030	R01
OS/32 Operator Pocket Guide	48-003	R04
OS/32 System Support Utilities Reference Manual	48-031	R01
<b>Support Programs:</b>		
OS/32 Edit User Guide	48-008	R02



OS/32 Aids User Guide	S29-374	R04
OS/32 Copy User Guide	48-101	R00
Source Updater User Guide	S29-630	R02
SPOOLER (SPI/32) System Administration Reference Manual	48-056	R00
OS/32 FASTBACK Reference Manual	48-063	R00
<b>Programming Reference Part 1:</b>		
OS/32 LINK Reference Manual	48-005	R02
OS/32 Application Level Programmer Reference Manual	48-039	R01
<b>Programming Reference Part 2:</b>		
Macro/32 Processor and Macro Library Utility Reference Manual	48-057	R00
Common Assembly Language/32 (CAL/32) Reference Manual	48-050	R00
OS/32 System Macro Library Reference Manual	48-006 F01	R01
<b>System Reference:</b>		
OS/32 System Level Programmer Reference Manual	48-040	R01
OS/32 Supervisor Call (SVC) Reference Manual	48-038	R01
<b>System Administration:</b>		
OS/32 Patch Reference Manual	48-016	R00
OS/32 System Planning & Configuration Guide	48-024	R02
OS/32 Library Loader Reference Manual	48-020	R00
OS/32 Mini I/O System User Manual	S29-485	R00
OS/32 System Generation (SYSGEN/32) Reference Manual	48-037	R01
OS/32 FASTCHEK Reference Manual	48-064 F01	R00

## Basic Data Communications:

OS/32 Data Communications Reference Manual	S29-541	R02
OS/32 Asynchronous Communications Reference Manual	48-047	R00
OS/32 Character Synchronous Communications Reference Manual	S29-543 F01	R02

## 6 PROGRAM PACKAGE

The OS/32 Program Package, 04-082, consists of the following items:

Part Number		Program Components	Format
03-064	M00 R06-04	OS/32 AIDS	object
03-065	M00 R04-01	OS/32 Library Loader	object
03-065	M08 R04-01	OS/32 Library Loader	image
03-067	M00 R04	32-bit Relocating Loader	object
03-070	M00 R03	OS/32 Bootstrap Puncher	object
03-072	M00 R06-02	OS/32 Configuration Utility Program (CUP)	object
03-072	M08 R06-02	OS/32 Configuration Utility Program (CUP)	image
03-074	M00 R06-00	OS/32 Bootstrap Loader	object
03-080	M00 R08-01	Disc Integrity Check	object
03-080	M08 R08-01	Disc Integrity Check	image
03-081	M00 R05-01	OS/32 Disc Initializer	object
03-081	M08 R05-01	OS/32 Disc Initializer	image
03-089	M00 R04-01	OS/32 Disc Dump	object
03-089	M08 R04-01	OS/32 Disc Dump	image
03-090	M00 R04-02	OS/32 Source Updater	object
03-090	M08 R04-02	OS/32 Source Updater	image
03-094	M09 R06-02	OS/32 High Level Operator Command (HLOC)	source

03-095	M00	R06-02	OS/32 Dump Print	object	
03-095	M08	R06-02	OS/32 Dump Print	image	
03-120	F01	M08	R06-02	OS/32 Starter 1	image
03-120	F02	M08	R06-02	OS/32 Starter 2	image
03-120	F03	M08	R06-02	OS/32 Starter 3	image
03-145	M00	R03-01	OS/32 Edit	object	
03-145	M08	R03-01	OS/32 Edit	image	
03-145	F01	M08	R03-01	OS/32 Edit (shared segment)	image
03-145	F02	M09	R03-01	OS/32 Edit Help File	source
03-149	M08	R00-02	Tape Labeller Program	image	
03-152	M00	R02-03	OS/32 Spooler	object	
03-152	M08	R02-03	OS/32 Spooler	image	
03-153	M00	R03-01	OS/32 Disc BACKUP	object	
03-153	M08	R03-01	OS/32 Disc BACKUP	image	
03-196	F01	M00	R01-02	OS/32 Patch	object
03-196	F01	M08	R01-02	OS/32 Patch	image
03-196	F02	M09	R01-02	OS/32 Patch Help File	source
03-215	M00	R01	OS/32 Copy	image	
03-215	M08	R01	OS/32 Copy	image	
03-215	M09	R01	OS/32 Copy Help File	source	
03-217	F01	M08	R00	OS/32 File Manager Support Utility Program	image
03-217	F02	M09	R00	OS/32 File Manager Support CSS	source
03-223	M09	R02	FORTTRAN 7 RTL Error Messages	source	
03-234	M00	R01-01	OS/32 Error Report Program Library	object	
03-234	M08	R01-01	OS/32 Error Report Program	image	
03-241	M08	R00-02	OS/32 Accounting Report Utility	image	

03-241	F01 M00 P00-02	OS/32 Accounting Report Utility Task FORTRAN Library	object
03-241	F03 M00 P00-02	OS/32 Accounting Report Utility Task CAL Library	object
03-242	M00 P01	OS/32 LINK	object
03-242	M08 P01	OS/32 LINK	image
03-242	M09 P01	OS/32 LINK Help File	source
03-244	M00 P00-01	OS/32 Accounting Facility Data Collection Program	object
03-244	M08 P00-01	OS/32 Accounting Facility Data Collection Program	image
03-245	M00 P00	Environment Generation Utility	object
03-245	M08 P00	Environment Generation Utility	image
03-338	M00 P00	Common Assembler Language	object
03-338	M08 P00	Common Assembler Language	image
03-339	M00 P00	Macro/32 Processor	object
03-339	M08 P00	Macro/32 Processor	image
03-340	M00 P00-01	Macro Library Utility	object
03-340	M08 P00-01	Macro Library Utility	image
03-344	M00 P00-01	OS/32 FASTCHEK	object
03-344	M08 P00-01	OS/32 FASTCHEK	image
03-345	M00 P00	OS/32 FASTBACK	object
03-345	M08 P00	OS/32 FASTBACK	image
03-355	M09 P00-01	OS/32 System Generation Procedures	source
03-359	M00 P00-01	OS/32 System Generation Program & Run-Time Library	object
03-360	M08 P00-01	OS/32 System Generation Program	image
03-361	M00 P00-01	OS/32 System Generation Macro Library	object

03-361	M09 R00-01	OS/32 System Generation Macros	source
03-362	M09 R00-01	OS/32 System Generation Dialog Text	source
03-363	M09 R00-01	OS/32 System Generation Help Text	source
03-443	M00 R00	Virtual Task Manager Support Module	object
03-590	M00 R00	Commercial Spooler SPL/32	object
03-590	M08 R00	Commercial Spooler SPL/32	image
03-591	M00 F00	Commercial Spooler input program	object
03-591	M08 R00	Commercial Spooler input program	image
03-592	M00 R00	Commercial Spooler output program	object
03-592	M08 F00	Commercial Spooler output program	image
03-593	M00 R00	Commercial Spooler control task	object
03-593	M08 R00	Commercial Spooler control task	image
03-594	M09 R00	Commercial Spooler Messages	source
03-595	M09 R00	Commercial Spooler error messages	source
03-931	M00 R00	Compatible LINK Utility	object
03-931	M08 R00	Compatible LINK Utility	image
07-058	M00 R06-02	OS/32 System Module Library	object
07-060	M00 R09-01	OS/32 Driver Library	object
07-060 F99	M00 R09-01	OS/32 General Purpose Driver Macro Library	object
07-060 F99	M09 R09-01	OS/32 General Purpose Driver Macros	source
07-067	M00 R06-02	OS/32 UBOT (OS/32 Dummy End)	object
07-094	M00 R00	32-bit Mini I/O RTL Routine	object

07-199	M00 P06-02	OS/32 Internal OS Macro Library	object
07-199	M09 R06-02	OS/32 Internal OS Macros	source
07-200	M00 R06-02	OS/32 OS Data Structures Macro Library	object
07-200	M09 R06-02	OS/32 OS Data Structures Macros	source
07-217	M00 R01-01	OS/32 System Macro Library	object
07-217	M09 R01-01	OS/32 System Macros	source
07-220	M00 R02-01	Basic Data Communications System Library	object
07-221	M00 P02-01	Basic Data Communications Driver Library	object
07-225	M00 R00	PENnet ZBID System Library	object
07-226	M00 R00	PENnet ZBID Driver Library	object
07-231	M00 R02	Basic Data Communications Macro Library	object
07-231	M09 R01	Basic Data Communications Macros	source
07-237	M00 R01	OS/32 Help	object
07-237	M08 R01	OS/32 Help Segment	image

Appendix A contains a description of the package once it has been unpackaged to disc; Appendix B contains the LINK options for those programs provided in both object and image format.

#### NOTE

The following items are being released with the OS/32 6.2 package for the last time:

03-072	Configuration Utility Program
03-080	Disc Integrity Check
03-081	Disc Initializer

CUPMT is being superceded by SYSGEN32, and FASTCHEK will supercede both DISCHECK and DISCINIT.

TET32 (03-082) has been dropped from the OS/32 6.2 package and will no longer be supported.

## 7 UNPACKAGING AND INSTALLATION

Users of OS/32 6.1 and prior releases may proceed to Section 7.7 to unpack the program files. New users are provided with a magnetic tape to ensure that a loadable OS and BACKUP tasks are available to restore the disc from the tape copy.

### 7.1 Magnetic Tape Organization

Entirely new users of OS/32 will need the following information before unpacking their files to disc; each tape package, 800 and 1500 bpi, consists of two tapes. The first tape contains the files for the software package in backup format. The second tape contains starter systems. Refer to Section 8 for applications of the starters provided. The contents and procedures are the same for either package. The tape is organized as follows:

```
BOOT32.IMG  
OS32MTS.001 ← 8/32  
-FM-  
OS32MTS.002  
-FM-  
OS32MTS.003  
-FM-  
FASTCHEK.TSK  
-FM-  
BACKUP.TSK  
-FM-  
-FM-
```

### 7.2 Start-up Procedures

A detailed explanation on loading the BOOT32, LSU Loader and starter system for a 7/32 or 8/32 is contained in Chapter 2 of the OS/32 Operator's Reference Manual, Publication Number 48-030 R01. A "cookbook" summary of the general unpacking and installation procedure is described below for the convenience of the user:

#### 7.2.1 7/32 and 8/32 Systems

1. Load the 32-bit Bootstrap Loader (BOOT32).
2. Using the BCOTLDR, load STARTER1.
3. Running under the STARTER system, load BACKUP from the starter tape, mount tape with package files and backup files to the selected disc.

## 7.2.2 Perkin-Elmer 3200 Family Processors

1. Initialize the processor to display the system menu on the console. Select the proper device and load the starter for the target machine.
2. Running under the Starter system, load BACKUP from the starter tape, mount the tape with the package files and backup files to the selected disc.

## 7.3 System Initialization

### 7.3.1 7/32 and 8/32 Systems

- o Load the 32-bit Bootstrap Loader from the magnetic tape by executing the "50 Sequence". Initialize the following memory locations:

Location	Contents
X'34'	X'0000'
X'36'	X'0000'
X'50'	X'D500'
X'52'	X'00CF'
X'54'	X'4300'
X'56'	X'0080'
X'78'	X'XXYY' (XX=Device address of magnetic tape) (YY=40 for 6250 tapes;=A1 for all others)
X'7A'	N'ZZDD' (ZZ=Device address of magnetic tape) (DD=device code in hex of magnetic tape)
X'7C'	X'00SS' (SS=selch address for magnetic tape)
X'84'	X'5000'
X'86'	X'6000'

- o Clear the PSW

Enter:

DTA-0-FN-1.

- o To load the BOOT Loader, start execution at location X'50.'

DTA-50-ADD-RUN.



### 7.3.2 Perkin-Elmer 3200 Family Processor

If your system contains a 2Kb or 8Kb LSU, refer to Chapter 2, Sections 2.4.3 and 2.4.4 of the OS/32 Operator's Reference Manual, Publication Number 48-030 R01, for system initialization.

#### 7.3.2.1 Procedure for a Matching Hardware Configuration

After the device mnemonics are displayed on the system console, the LSU responds with this prompt:

- Prompt: Device=

Response: MGNN (magnetic tape name displayed on the system console.)

- Prompt: Filemarks=

Response: NNN (NNN represents the decimal number of filemarks to be skipped on the tape for the OS/32 file to be loaded.)

NNN=1 for STARTER2  
NNN=2 for STARTER3

When the number of filemarks is entered followed by a carriage return, the LSU loads OS/32.

#### 7.3.2.2 Procedure for a Non-Matching Hardware Configuration

- Prompt: Device=

Response: OTHR

- Prompt: Dev #=

Response: NN (NN represents hexadecimal numbers indicating the device number of the device containing OS/32.)

- Prompt: Code=

Response: CC (CC represents two hexadecimal numbers indicating the device code of the device containing OS/32. For 6250 tape drives, the device code must be entered in decimal (68).

- Prompt: SLCH=

Response: SS (SS represents three hexadecimal numbers indicating the selch number of the magnetic tape or disc device containing OS/32.)

- Prompt: Filemarks

Response: NNN (NNN represents the decimal number of filemarks to be skipped on the tape for the OS/32 file to be loaded.)

NNN=1 for STARTER2

NNN=2 for STARTER3

#### NOTE

If the 8Kb LSU Loader is used, refer to Appendix E (Known Problems/Avoidance Procedures), Section 2.

#### 7.3.3 Common Steps for the 7/32, 8/32 and the Perkin-Elmer 3200 Family Processor

1. When the starter system is loaded, the OS prompt is output on the console:

```
OS32MT06-02.OS32MTSn      (n is 1, 2, or 3)
ENTER TIME AND DATE       corresponding to version
                           of STARTER)
```

2. Issue a SET TIME command:

```
SET TIME mm/dd/yy, hh:mm:ss
```

3. Refer to Chapter 2 of the OS/32 Operator's Reference Manual, if:

- any errors have occurred
- the STARTER has to be patched to change the console device address or type.

- the STARTER requires any reconfiguration to match the machine. For that reason, please verify that the contents of the following locations in the DCB match the hardware configuration:

DCB Tag	Offset	Content Description
a. DCB.DN	X'1A'	Device Number
b. DCB.SDN	X'9C'	Sech Device Number
c. DCB.CDN	X'9E'	Controller Device Number

4. If there is insufficient dynamic systems space available for running CUPMT, or SYSGEN32 procedures for running an OS, the user may receive an error message such as "ASGN-ERR TYPE=BUFF". The user can increase the available dynamic system space by using the "SET SYS" command.

#### 7.4 Unpackaging to a New (Empty) Disc

In order to prepare a disc pack for use by OS/32, the pack must be formatted by the stand-alone Common Disc Test/Formatter Program, 06-173, or the Common Mass Storage Media Disc Formatter, 06-201. Appendix H summarizes the use of these programs.

#### 7.5 Additional Options

The primary function of the unpackaging procedure is to run the BACKUP utility. Optionally, the output disc will be initialized and cleared using the FASTCHEK utility. The OS/32 System Support Utilities Reference Manual, Publication Number 48-031 R01, and the OS/32 FASTCHEK Reference Manual, Publication Number 48-064 F01 R01, provide detailed descriptions of the BACKUP and FASTCHEK programs. The versions of BACKUP and FASTCHEK provided for unpackaging should only be used with the STARTER systems, or a user-generated OS/32 6.2 system. They will not function correctly with a previous version of the OS.

#### 7.6 System Generation (SYSGEN)

Following the successful unpackaging of OS/32 6.2, several additional steps are recommended to complete the installation. First, take time to review the OS/32 Operator's Reference Manual, Publication Number 48-030 R01, and the OS/32 System Generation Reference Manual, Publication Number 48-037 R01, or the OS/32 System Planning and Configuration Guide, Publication Number 48-024 R02. An understanding of the information in these documents is required for the successful completion of the activities to be performed.

### 7.6.1 SYSGEN32 or CUPMT

With OS/32 6.2, an updated SYSGEN32 program is being released concurrently with the updated Configuration Utility Program (CUPMT).

We recommend that all users proceed to Section 7.6.1.1 and use SYSGEN32 because CUPMT will not be supported or released with future revisions of OS/32. However, existing users may want to use CUPMT, Section 7.6.1.2, for their established system configuration statements since these statements require changes to make them compatible with SYSGEN32.

#### NOTE

SYSGEN32 cannot be used on a system with only 256k of memory.

#### 7.6.1.1 SYSGEN32

A System Generation Procedures Package (OSGEN) is provided to assist in the system generation process. These procedures are described in the OS/32 System Reference Manual, Publication Manual 48-037 R01. To install OSGEN, mark the disc on line with core directory, and set the system volume to the disc name. Execute the OSGEN.CSS procedure as follows:

```
Mark dn:,ON,,CD
Vol Voln
OSGEN
```

Next, perform a custom generation of OS/32 to match the desired machine configuration. Execute the SYSGEN.CSS procedure to prepare and process the configuration statements to obtain a boot-loadable OS image. The SYSGEN32 input statements for Starter systems are provided as a model. Upon the successful generation of the new OS, proceed to Section 7.6.2.

#### 7.6.1.2 CUPMT

The High Level Operator Command Package (HLOC) provides procedures to assist in the system generation process for CUPMT. These procedures are described in the OS/32 System Planning and Configuration Guide, Publication Number 48-024 R02. To install HLOC, mark the disc on line with core directory, and set the system volume to the disc volume name. Then call the HLOC.CSS procedure:

```
MARK dn:,ON,,CD
VOL voln
HLOC
```

Next, perform a custom generation of OS/32 to match the desired machine configuration. Use EDIT32 to prepare the configuration statement input to CUPMT. Use the SYSGEN1.CSS and SYSGEN2.CSS procedures to generate the Operating System. The output of SYSGEN2 can be further processed by the SYSGEN3.CSS procedure to produce a boot-loadable OS image.

### 7.6.2 Start Custom OS

Shut down the STARTER system by ending or CANCELing any tasks in memory, and MARKing all discs OFF. Use the BOOTLOADER or LSU to load the OS/32 system just built.

Running with your new system, use OS/32 LINK to establish task images of support software not provided in image format.

## 7.7 Unpackaging Files

### 7.7.1 Disc Unpackaging

The files are supplied on 10 and 16Mb discs. The 10Mb disc is comprised of two 5Mb discs which are labelled 'MT6A' and 'MT6B'. The 16Mb disc is labelled 'MT6A'. There is no unpackaging procedure for the disc packages as they are immediately usable.

### 7.7.2 Magnetic Tape Unpackaging

The OS/32 files are supplied on an 800 or 1600 BPI magnetic tape in OS/32 BACKUP Utility format. The unpackaging procedure involves copying the files from tape to a user disc utilizing OS/32 BACKUP (see Chapter 5 of the OS/32 System Support Utilities Reference Manual, Publication Number 48-031 R01).

#### NOTE

Before unpackaging, the new user should load FASTCHEK.TSK from the starter tape to initialize his selected disc.

After selecting a disc onto which the files are to be copied, review the disc filenames to ensure that they do not conflict with the filenames in this package as listed in Appendix A of this document. Rename any conflicting filenames to some other appropriate name.

#### NOTE

The supplied OS/32 6.2 files must not be renamed because the OS command substitution (CSS) files require specific filenames as listed in Appendix A, Package Table of Contents, of this document.

To unpackage the files from the system console, mount the supplied OS 6.2 magnetic tape and run OS/32 BACKUP Utility via the following commands:

```
LOAD BACKUP
TASK BACKUP
START ,IN=dev1:,OUT=dev2:,LIST=dev3:,VERIFY
```

where:

```
dev1  is the device name for the magnetic tape drive
dev2  is the device name for the disc drive
dev3  is the device name for the printer or list device
```

Note that all device names have the standard OS/32 format. They are dependent on the particular configuration of the user system and can be determined by entering the OS/32 command 'DISPLAY DEVICES' at the console or terminal.

#### NOTE

The procedure for running backup from a Multi-Terminal Monitor (MTM) terminal is identical to the one described above for the system console, with the exception that the user must sign on to an account having bare disc access and file account privileges. Account 255 will always have these privileges.

#### 7.7.3 Post-Installation Procedures

Before using the installed software, it is recommended that the following procedures be executed:

- o The software should be copied for archival purposes using the OS/32 BACKUP Utility.
- o The following CSS command should be entered:

```
INFORM [list-device]
```

Information regarding this product will then be displayed on the system console by default, or to an optional device, list-device, specified in the CSS call.

## 8. STARTER SYSTEMS

Three pre-generated operating systems are provided in the package for use in unpackaging and system generation. The STARTER systems provide the minimum environment necessary to perform a custom system generation.

### NOTE

With the release of OS/32 6.2, a starter may be used to complete the unpackaging procedure as described in this document for any system supporting DIOS or extended addressing ranges.

Refer to Appendix G for the STARTER system configuration statements and maps.

### OS/32 STARTER1 (03-120F01)

STARTER1 is designed for 8/32 and 7/32 systems.

#### Devices Supported:

- Model 8/32 or 7/32 CPU
- Model 33 TTY Keyboard/Printer (console)
- Card Reader with software conversion
- Line Printer
- 800 bpi Magnetic Tape
- 1600 bpi Magnetic tape
- 6250 bpi Magnetic tape
- 2 Cassette Tapes
- Non-editing CRT
- Dual FLOPPY Disc
- 2.5Mb Disc
- 5Mb Disc (fixed and removable)
- 40Mb Disc (removable)
- 67Mb Disc (removable)(IDC/MSM)
- 256Mb Disc (removable)(IDC/MSM)

OS/32 STARTER2 (03-120F02)

STARTER2 is designed for 3220 systems.

Devices Supported:

- Perkin-Elmer Model 3220 CPU
- Model 550 CRT as a console device
- Card Reader with software conversion
- Line Printer
- 800 bpi Magnetic Tape
- 1600 bpi Magnetic Tape
- 6250 bpi Magnetic Tape
- Non-editing CRT
- Dual Floppy Disc
- 2.5Mb Disc
- 5Mb Disc (fixed and removable)
- 40Mb Disc (removable)
- 67Mb Disc (removable)(IDC/MSM)
- 256Mb Disc (removable)(IDC/MSM)

OS/32 STARTER3 (03-120F03)

STARTER3 is designed for 3210, 3230, 3240 and 3250 systems.

Devices Supported:

- Perkin-Elmer Model 3210, 3230, 3240 or 3250 CPU
- Model 550 CRT as a console device
- Card Reader with software conversion
- Line Printer
- 800 bpi Magnetic Tape
- 1600 bpi Magnetic Tape
- 6250 bpi Magnetic Tape
- Non-editing CRT
- Dual Floppy Disc
- 2.5Mb Disc
- 5Mb Disc (fixed and removable)
- 16Mb Disc (fixed and removable)
- 40Mb Disc (removable)
- 48Mb Disc (fixed)
- 67Mb Disc (removable)
- 80Mb Disc (fixed)
- 256Mb Disc (removable)(IDC/MSM)
- 300Mb Disc (Fixed)(IDC/MSM)



APPENDIX A  
PACKAGE TABLE OF CONTENTS

The entire package is supplied either on a disc or a magnetic tape. The following is a list of all the components of the OS/32 6.2 object package:

File Name	Component Program	Format
ACCTF.OBJ	Accounting Report Utility FORTRAN Library	object
ACCTC.OBJ	Accounting Report Utility CAL Library	object
ACCT.TSK	Accounting Report Utility Task	image
AFDCP.OBJ	Accounting Facility (Dummy MTM) Data Collection Program	object
AFDCP.TSK	Accounting Facility Data Collection Program	image
BACKUP.OBJ	OS/32 BACKUP	object
BACKUP.TSK	OS/32 BACKUP	image
BOOT32.OBJ	OS/32 Direct Access Bootstrap Loader	object
BTPCH32.OBJ	OS/32 Bootstrap Puncher	object
BTPCH32.TSK	OS/32 Bootstrap Puncher	image
CAL32.OBJ	Common Assembler Language	object
CAL32.TSK	Common Assembler Language	image
CLU.OBJ	OS/32 Compatible LINK Utility	object
CLU.TSK	OS/32 Compatible LINK Utility	image
COPY32.OBJ	OS/32 COPY	object
COPY32.TSK	OS/32 COPY	image
COPY32.HLP	OS/32 COPY Help Text	source
CUPMT.TSK	OS/32 Configuration Utility Program	image
CUPMT.OBJ	OS/32 Configuration Utility Program	object

DISCHECK.OBJ	Disc Integrity Check Utility Program	object
DISCHECK.TSK	Disc Integrity Check Utility Program	image
DISCDUMP.OBJ	OS/32 Disc Dump Utility Program	object
DISCDUMP.TSK	OS/32 Disc Dump Utility Program	image
DISCINIT.OBJ	OS/32 Disc Initializer Utility Program	object
DISCINIT.TSK	OS/32 Disc Initializer Utility Program	image
DRIVER.LIB	OS/32 General Purpose Driver Library	object
DUMPRINT.OBJ	Dump Print	object
DUMPRINT.TSK	Dump Print	image
DVRM.MLB	OS/32 General Purpose Driver Macros	library
DVRM.MAC	OS/32 General Purpose Driver Macros	source
EDIT32.OBJ	OS/32 EDIT	object
EDIT32.TSK	OS/32 EDIT (Pure & Impure)	image
EDIT32.HLP	OS/32 EDIT and OS/32 TEXT file	source
EDITR062.SEG	OS/32 EDIT (Shared Segment)	image
EGU.OBJ	Environment Generation Utility	object
EGU.TSK	Environment Generation Utility	image
ERROR.OBJ	OS/32 Error Report Program	object
ERROR.TSK	OS/32 Error Report Program	image
F7RTL50.ERR	FORTTRAN 7 RTL Error Messages	source
FASTBACK.OBJ	OS/32 High Speed Disc-to-Tape, Tape-to-Disc Utility Program	object
FASTBACK.TSK	OS/32 High Speed Disc-to-Tape, Tape-to-Disc Utility Program	image
FASTCHEK.OBJ	OS/32 Disc Checking, Renaming and Initializing Utility Program	object
FASTCHEK.TSK	OS/32 Disc Checking, Renaming and Initializing Utility Program	image
FMSP.TSK	File Manager Support Utility	image

HLOC.CSS	OS/32 High Level Operator Command Package	source
HELPRO62.SEG	Help File Processor	image
HELPRO62.OBJ	Help File Processor	object
INFORM.CSS	Restricted Rights Disclosure	source
INIT.CSS	File Manager Support CSS	source
ITBDLIB.LIB	Basic Data Communications Driver Library	object
ITBSYS.LIB	Basic Data Communications System Library	object
ITESZDLC.LIB	PENnet ZBID System Library	object
ITEDZDLC.LIB	PENnet ZBID Driver Library	object
ITMS.MLB	Basic Data Communications Macros	library
ITMS.MAC	Basic Data Communications Macros	source
LIBLDR.OBJ	OS/32 Library Loader	object
LIBLDR.TSK	OS/32 Library Loader	image
LINK.OBJ	OS/32 LINK	object
LINK.TSK	OS/32 LINK	image
LINK0100.HLP	OS/32 LINK Help Text	source
MACRO32.OBJ	Macro Processor	object
MACRO32.TSK	Macro Processor	image
MIORTL.OBJ	32-Bit Mini I/O RTL Routines	object
MLU32.OBJ	Macro Library Utility	object
MLU32.TSK	Macro Library Utility	image
OS32MTS1.001	OS/32 STARTER1 (7/32, 8/32 systems)	image
OS32MDL.111	Multi-Media Diagnostic Loader	image
OS32MTS2.002	OS/32 STARTER2 (3220 System)	image
OS32MTS3.003	OS/32 STARTER3 (3210, 3230, 3240 & 3250 systems)	image
OS32MTS1.SYS	Standard STARTER1 SYSGEN32 input statements	source

OS32MTS2.SYS	Standard STARTER2 SYSGEN32 input statements	source
OS32MTS3.SYS	Standard STARTER3 SYSGEN32 input statements	source
OS62M95.LST	OS/32 6.2 Reference Document	listing
OSAIDS.OBJ	OS/32 AIDS	object
OSRPRTL.OBJ	High Level Language RTL Library	object
OSSRCUP.OBJ	Source Updater	object
OSSRCUP.TSK	Source Updater	image
OSGEN.CSS	OS/32 System Generation Procedures for SYSGEN32	source
PATCH.OBJ	OS/32 PATCH	object
PATCH.TSK	OS/32 PATCH	image
PATCH.HLP	OS/32 PATCH Help Text	source
RELLDR.OBJ	32-bit Relocating Loader	object
SPL32.TSK	Commercial Spooler SPL/32	image
SPL32.LIB	Commercial Spooler SPL/32	object
SPL32.LNK	Commercial Spooler SPL/32 LINK Commands	source
SPL32OV.LNK	Commercial Spooler SPL/32 LINK Commands-overlaid version	source
SPLINPUT.TSK	Commercial Spooler-input program	image
SPLINPUT.LIB	Commercial Spooler - input program	object
SPL32IN.LNK	Commercial Spooler - input program LINK Commands	source
SPL32INO.LNK	Commercial Spooler - input program LINK commands - overlaid version	source
SPLOUT.TSK	Commercial Spooler - output program	image
SPLOUT.LIB	Commercial Spooler - output program	object
SPL32OT.LNK	Commercial Spooler - output program LINK commands	source
SPL32OTO.LNK	Commercial Spooler output program LINK commands overlaid version	source

SPLC.TSK	Commercial Spooler-control task	image
SPLC.LIB	Commercial Spooler - control task	object
SPL32C.LNK	Commercial Spooler - control task	source
SPL32COV.LNK	Commercial Spooler - control task LINK commands - overlaid version	source
SPLDISPL.MES	Commercial Spooler - Messages	source
SPLERROR.MES	Commercial Spooler - Error Messages	source
SPOOLER.OBJ	OS/32 SPOOLER	object
SPOOLER.TSK	OS/32 SPOOLER	image
SYS.LIB	OS/32 System Module Object Library	object
SYSGEN32.OBJ	OS/32 System Generation Program	object
SYSGN32C.OBJ	OS/32 System Generation CAL Subroutines	object
SYSGEN32.TSK	OS/32 System Generation Program	image
SYSGEN32.MLB	OS/32 System Generation Macros	library
SYSGEN32.MAC	OS/32 System Generation Macros	source
SYSGEN32.CNV	OS/32 System Generation Dialog Text	source
SYSGEN32.HLP	OS/32 System Generation Help Text	source
SYSGEN32.RTL	OS/32 System Generation Run-Time Library	object
SYSMAC32.MLB	OS/32 System User Macros	library
SYSMAC32.MAC	OS/32 System User Macros	source
SYSMACRO.MLB	OS/32 Internal OS Macros	library
SYSMACRO.MAC	OS/32 Internal OS Macros	source
SYSSTRUC.MLB	OS/32 Data Structures Macros	library
SYSSTRUC.MAC	OS/32 Data Structures Macros	source
TAPLBL.TSK	Tape Labeller Program	image
UBOT.OBJ	OS/32 UBOT.F01 Object Module	object
VTM32.OBJ	Virtual Task Manager - Support Module	object

APPENDIX B  
TASK ESTABLISHMENT OPTIONS

As a convenience to the user, programs used in the unpacking and/or system generation procedures are provided in image format. The table below indicates the LINK commands and options which were used in establishing those tasks. Options are imbedded in the object code and are noted below preceded by "+". Any options not explicitly stated assume the default. If any particular option needs to be changed or overridden, the user need only insert an option command with the desired parameter after the "Include" for the object modules and before the "Build". Refer to the OS/32 LINK Reference Manual, Publication Number 48-005 R02, for complete information on OS/32 LINK.

NOTE: These options require the use of LINK R01.

Program Name	LINK Options
OS/32 Disc Initializer	LOG CON: TITLE DISCINIT ESTABLISH TASK INCLUDE DISCINIT +OPT WORK=(3200,XB0000),SYSSPACE=X3000,LU=2 +OPT DISC,NROLL,SEG MAP CON: BUILD DISCINIT END
Disc Integrity Check	LOG CON: TITLE DISCHECK ESTABLISH TASK INCLUDE DISCHECK +OPT WORK=(X3400,XB0000),SYSSPACE=XFFFFFF,LU=8 +OPT DISC,ACP,NKEY,NROLL,SEG MAP CON: BUILD DISCHECK END
OS/32 Disc Backup	LOG CON: TITLE BACKUP ESTABLISH TASK INCLUDE BACKUP +OPT WORK=(X3400,X80000),SYSSPACE=XFFFFFF,LU=8 +OPT DISK,ACP,NKEY,NROLL,SEG MAP CON: BUILD BACKUP END

OS/32 Disc  
Dump

LOG CON:  
TITLE DISCDUMP  
ESTABLISH TASK  
INCLUDE DISCDUMP  
+OPT WORK=X3200,SYSSPACE=XFFFFFF,LU=8  
+OPT DISC,ACP,NKEY,NROLL,SEG  
MAP CON:  
BUILD DISCDUMP  
END

Dump Print

LOG CON:  
TITLE DUMPRINT  
ESTABLISH TASK  
INCLUDE DUMPRINT  
+OPT SYSSPACE=XFFFF,LU=6  
MAP CON:  
BUILD DUMPRINT  
END

OS/32  
Bootpuncher

LOG CON:  
TITLE BTPCH32  
ESTABLISH TASK  
OPT WORK=XA00,SYSSPACE=X3000  
INCLUDE BTPCH32  
MAP CON:  
BUILD BTPCH32  
END

OS/32  
Configuration  
Utility  
Program

LOG CON:  
TITLE CUPMT  
ESTABLISH TASK  
INCLUDE CUPMT  
+OPT SEG,WORK=X2900,SYSSPACE=XFFFFFF  
MAP CON:  
BUILD CUPMT  
END

OS/32 Library  
Loader

LOG CON:  
TITLE LIBLDR  
ESTABLISH TASK  
+OPT LU=25,WORK=X5000,SYSSPACE=XFFFFFF  
INCLUDE LIBLDR  
MAP CON:  
BUILD LIBLDR  
END

OS/32 Patch

LOG CON:  
TITLE PATCH  
ESTABLISH TASK  
INCLUDE PATCH  
+OPT SEGMENTED,WORK=(X2000,X80000)  
+OPT SYSSPACE=XFFFFFF,UTASK  
MAP CON:  
BUILD PATCH  
END

OS/32 Copy

LOG CON:  
TITLE COPY32  
ESTABLISH TASK  
INCLUDE COPY32  
+OPT SEG,WORK=X3200,SYSSPACE=XFFFFFF,ACP  
RESOLVE HELPRO62.SEG  
MAP CON:  
BUILD COPY32  
END

OS/32 Account-  
ing File Data  
Collection  
Program

LOG CON:  
TITLE AFDCP  
ESTABLISH TASK  
INCLUDE AFDCP  
+OPT COMMUNICATE,LU=6  
MAP CON:  
BUILD AFDCP  
END



\*Help SEG

```
LOG CON:
TITLE HELPRO62
ESTA IMAGE
INCLUDE HELPRO62
MAP CON:
BUILD HELPRO62.SEG
END
```

\*OS/32 Edit  
SEG

```
LOG CON:
TITLE EDITR062.SEG
ESTA IMAGE,ADDR=C0000
RESOLVE HELPRO62.SEG,ADDR=E0000
INCLUDE EDIT32,EDIT32A
MAP CON:
BUILD EDITR062.SEG
END
```

OS/32 Edit

```
LOG CON:
TITLE EDIT32
ESTABLISH TASK
RESOLVE EDITR062.SEG
INCLUDE EDIT32,DR
+OPT SEG,WORK=X100
+OPT XSVC1,SYSSPACE=XFFFFFF
INCLUDE EDIT32,EDIMP
MAP CON:
BUILD EDIT32
END
```

SYSGEN32

```
LOG CON:
TITLE SYSGEN32
ESTABLISH TASK
INCLUDE SYSGEN32
LIB SYSGEN32.RTL
INCLUDE SYSGN32C
INCLUDE EDIT32,EDIMP
OPTION FLOAT,DFLOAT,NXSVC1,WORK=XA000,SYS=XFFFFFF
RESOLVE EDITR062.SEG,ADDR=C0000
MAP CON:
BU SYSGEN32
END
```

-----

\* IMPORTANT: If the HELPRO62 and EDITR062.SEG segment files are re-established as shown and the original .SEG files are deleted or renamed, the following utilities must be re-established:

1. COPY/32
2. EDIT/32
3. SYSGEN/32
4. LINK

Source Updater LOG CON:  
TITLE OSSRCUP  
ESTABLISH TASK  
INCLUDE OSSRCUP  
+OPT WORK=(X2800,XB0000),SEG,LU=8,SYSSPACE=XFFFFFF  
MAP CON:  
BUILD OSSRCUP  
END

Common Assembler Language LOG CON:  
TITLE CAL32  
ESTABLISH TASK  
OPT WORK=X5000,SYS=XFFFFFF,SEG  
INCLUDE CAL32  
MAP CON:  
BUILD CAL32  
END

MACRO32 CAL Macro Processor LOG CON:  
TITLE MACRO32  
ESTABLISH TASK  
OPT WORK=(X5000,X10000),SYS=XFFFFFF,SEG  
INCLUDE MACRO32  
MAP CON:  
BUILD MACRO32  
END

MLU32 Macro Library Utility LOG CON:  
TITLE MLU32  
ESTABLISH TASK  
+OPT WORK=(X5000,X10000),SYS=XFFFFFF,SEG  
INCLUDE MLU32  
MAP CON:  
BUILD MLU32  
END

OS/32 Spooler LOG CON:  
TITLE SPOOLER  
ESTABLISH TASK  
INCLUDE SPOOLER  
+OPT WORK=X1000,SYSSPACE=XFFFFFF,NROLL,XSVC1  
+OPT COMMUNICATE,DISC,ACPRIVILEGE,NKEYCHECK  
MAP CON:  
OPT IOB=n  
BUILD SPOOLER  
END

n = 2 \* (number of physical printers +  
number of physical card reader-punches.)

NOTE: This task is supplied in image format with a default number of 8 IOB's.

OS/32 Error  
Report

```
LOG CON:
TITLE ERROR
ESTABLISH TASK
INCLUDE ERROR
+OPT FLOAT,DFLOAT,SEG,WORK=X1000
LIB OSRPRTL.OBJ
MAP CON:
BUILD ERROR
END
```

OS/32 LINK

Using LINK R00-01

```
LOG CON:
TITLE LINK
ESTABLISH TASK
OPT SEG,WORK=(8000,A0000),SYS=FFFFFF,ACP
SHARED HELPR062.SEG,ADDRESS=E0000,ACCESS=RE
INCLUDE LINK
MAP CON:,ADDR
BUILD LINK
END
```

Using LINK R01-00

```
LOG CON:
TITLE LINK
ESTABLISH TASK
OPT SEG,WORK=(X8000,XA0000),SYS=XFFFFFF,ACP
RESOLVE HELPR062.SEG,ADDRESS=E0000,ACCESS=RE
INCLUDE LINK
MAP CON:,ADDR
BUILD LINK
END
```

#### NOTE

For those users required to re-link LINK itself using LINK R00-01, the appropriate commands are included above. All other users are urged to use LINK.TSK included in the package for all necessary link editing.

OS/32  
Compatible  
LINK Utility

```
LOG CON:
TITLE CLU32
ESTABLISH TASK
OPT SEG,WORK=(X8000,XA0000),SYS=XFFFFFF,ACP
RESOLVE HELPR062.SEG,ACCESS=RE
INCLUDE CLU
MAP CON:,ADDR
BUILD CLU
END
```

Accounting  
Report  
Utility

```
LOG CON:
TITLE ACCT
ESTABLISH TASK
INCLUDE ACCTF.OBJ
INCLUDE ACCTC.OBJ
+OPT FL,DFL,DISC,ACP,NKEY
+OPT SYSSPACE=XFFFFFF,WORK=XA00
LIB OSRPRTL.OBJ
MAP CON:
BUILD ACCT
END
```

Environment  
Generation  
Utility

```
LOG CON:
TITLE EGU
ESTABLISH TASK
INCLUDE EGU
MAP CON:
BUILD EGU
END
```

FASTCHEK  
Disc  
Initializer &  
Disc Integrity  
Check Utility

```
LOG CON:
TITLE FASTCHEK
ESTABLISH TASK
MAP CON:
INCLUDE FASTCHEK
+OPT ABS=0
+OPT SYSSPACE=XFFFFFF
+OPT WORK=(X4000,XB0000)
+OPT SEGMENTED,UT
+OPT DISC,ACP,NROLL
+OPT LU=9,IOBLOCKS=1
+OPT NFLOAT,NDFLOAT
BUILD FASTCHEK
END
```

#### NOTE

LINK will give a warning message because the absolute space is less than 100, and on completion, will terminate with EOT (End-of-Task) Code 2. See Appendix E in OS/32 FASTCHEK Reference Manual, Publication Number 48-064 F01 R00, for further details.

FASTBACK

```
LOG CON:
TITLE FASTBACK
ESTABLISH TASK
MAP CON:
+OPT ABS=0
+OPT SYSSPACE=XFFFFFF
+OPT WORK=(XA000,X80000)
+OPT SEGMENTED,UT
+OPT DISC,ACP
+OPT NROLL,NKEY
+OPT LU=9,IOBLOCKS=1
+OPT NFLOAT,NDFLOAT
BUILD FASTBACK
END
```

#### NOTE

LINK will give the same warning and end-of-task code as FASTCHEK. See the OS/32 Fastback Reference Manual, Publication Number 48-063 R00, for further details.

#### Commercial Spooler

The four tasks comprising the commercial spooler, SPL/32, are distributed with LINK command files. Each task has two associated command files, a standard overlaid version and a full memory version. These command files must be used for the spooler product to execute properly.

Task Name	Command File Name
SPL32.TSK	SPL32OV.LNK - overlaid version SPL32.LNK - non-overlaid version
SPLINPUT.TSK	SPL32INO.LNK - overlaid version SPL32IN.LNK - non-overlaid version
SPLOUT.TSK	SPL32OTO.LNK - overlaid version SPL32OT.LNK - non-overlaid version
SPLC.TSK	SPL32COV.LNK - overlaid version SPL32C.LNK - non-overlaid version

-----  
Refer to the appropriate user documentation for LINK options for the remainder of the programs within the package.

APPENDIX C  
CONVERSION REQUIREMENTS  
AND  
NEW FEATURES

The OS/32 R06-02 release is comprised of the the following major features:

- o SPL/32
- o Bi-directional Input/Output Control (BIOC) CRT Driver
- o Virtual Task Manager (VTM) and Support
- o Enhanced Magnetic Tape Driver
- o Channel Manager Driver
- o Non-buffered Indexed Files
- o Extendable Contiguous Files
- o Extended File Accounts Support
- o Vertical Forms Control (VFC) Support
- o LINK R01-00 and the Compatible LINK Utility
- o SVC Enhancements
- o COPY/32 Enhancements
- o SPOOLER Enhancements
- o FASTBACK
- o PENnet Support
- o Utility Program Updates
- o Maintenance

1. SPL/32

SPL/32 R00 is a new product designed to meet the spooling requirements of the commercial marketplace. It has the features of the current spooler (03-152 R02-03) plus:

- Capability to add or drop devices while the Spooler is active.

- Support for forward and backward positioning by line or by page ("page" to be user-defined.)
- Capability for the operator to change the position of files on the print queue.
- Capability for the control of remote printers from an MTM terminal.
- Capability of the operator to access any information regarding the spooling environment.
- Dynamic association of a form type with a specified printer.
- Capability for forms alignment verification.
- Support of all features of vertical forms control.
- User-specifiable banner page with optional suppression of banner printing.

Complete information on the operation of commands to SPL/32<sup>1</sup> can be found in the SPOOLER (SPL/32) System Administration Reference Manual, #48-056 R00.

## 2. Bi-directional Input/Output Control CRT Driver

Bi-directional Input/Control (BIOC) CRT Driver, a user-written driver, becomes the standard CRT driver for device codes 34 and 36 through 40. It may also be used instead of the asynchronous terminal manager. Although BIOC does not replace the asynchronous terminal manager, future support for that terminal manager will be limited to maintenance only. BIOC supports VFC for both input and output. VFC read operations will be functionally equivalent to formatted reads. VFC write operations will interpret the first character in a write buffer as a forms control character. The remaining characters in the write buffer will be printed.

The 6.1 CRT driver, with SCRs applied and re-assembled, is included in the OS 6.2 package for those customers who absolutely require it. All users are urged to upgrade to the BIOC driver as soon as possible. To access the CRT driver using SYSGEN32, the user specifies a "USER=" parameter as follows:

```
CRT1: 012,39,USER=(CRT=1)
```

To obtain the CRT driver using CUPMT, the user must re-organize the driver library either by removing the BIOC driver and DCBs 34, 36, 37, 38, 39, and 40, which are immediately adjacent to it, or by moving the CRT driver and its DCBs 34, 36, 37, 38, and 39,

which are placed at the end of the library to a position in front of the BIOC driver and its DCBs.

### 3. Virtual Task Manager

The Virtual Task Manager (VTM) will be supported under OS/32 R06.02. VTM provides a user transparent virtual memory capability for FORTRAN tasks. The VTM product consists of an object module to be linked with the user's code, and OS routines which support the VTM functions.

### 4. Enhanced Magnetic Tape Driver

The magnetic tape driver will be enhanced to include the following:

- User control of the number of retries on data transfer errors in gapped mode. This feature is implemented through the SVC 1 extended options fullword. The high order eight bits of this fullword are used to specify the desired number of retries.
- The capability to erase variable lengths of tape, the length erased being equivalent to the buffer size specified in SVC1 parameter block.
- Software selection of magnetic density for write operations (800, 1600, or 6250 bpi). The user may append to his "ASSIGN" command the specification of "LOW", "MEDIUM", or "HI" for 800 BPI, 1600 BPI or 6250 BPI respectively.

### 5. Channel Manager Driver

The Channel Manager driver supports the Channel Manager, a microprocessor-based high-speed DMA channel. The hardware is contained on one standard Perkin-Elmer 15-inch multiwire-printed circuit board and is currently available in three functional variations:

- o 02-630 F00      general purpose DMA channel board
- o 02-630 F01      Channel Manager
- o 02-630 F02      microprocessor-implemented 3200 selector channel (SELCH)

The F00 version is a bare-bones, unprogrammed board and is not supported by the Channel Manager driver. The F02 version is a



compatible replacement for the standard Perkin-Elmer 3200 selch. As such, it is supported by other drivers and the user should refer to the Extended Selector Channel (ESELCH) Programming Manual, Publication Number 29-529, for further information.

The F01 version is designed to control the operation of Perkin-Elmer Mass Storage Module (MSM) or intelligent disc controller (IDC) drives. The Channel Manager accomplishes all standard SELCH functions, accepting commands and returning status on a host central processing unit (CPU) multiplexor (MUX) bus and controlling data transfers between high speed input/output (I/O) devices and local or shared memory. Use of the Channel Manager and its associated driver will increase CPU throughput by relieving the CPU of the overhead involved with setting up and monitoring peripheral controllers and drives and by switching between multiple I/O requests at points in the program sequence when I/O delays normally occur. The Channel Manager allows the concurrent execution of up to seven channel programs for different devices configured with the Channel Manager. The OS I/O subsystem queue I/O requests to the Channel Manager on a first-in, first-out basis. Future revisions of OS/32 and the Channel Manager driver will have the ability to handle and execute multiple concurrent channel programs. Further information is contained in the Channel Manager Programming Manual, Publication Number, 50-006.

## 6. Non-buffered Indexed Files

Non-buffered indexed files are open-ended files each with a chain of index blocks and a series of data blocks. The index blocks are chained together and contain fullword pointers to the data blocks. The primary difference between standard indexed files and non-buffered indexed files is that data is moved directly between the user's buffer in task space and the disc. The system space memory and CPU overhead of standard indexed files is eliminated. Each logical record of a non-buffered indexed file starts on a physical sector boundary.

Non-buffered indexed files can be accessed randomly or sequentially with both read and write privileges. Shared write access will allow more than one task to append or update a non-buffered indexed file concurrently. The open-ended structure of this file type allows the file to be extended sequentially by writing a logical record numbered one greater than the number of existing records. Non-buffered indexed files support ASCII, binary, and image I/O, test and set, forward space record, and backspace record operations. Write filemark operations are allowed but are treated as no-operation.

## 7. Extendable Contiguous Files

Extendable contiguous files are similar to standard contiguous files except that they are capable of being extended to the capacity limit of the physical disc. This file type has the following features:

- Logical record length is fixed at one sector, 256 bytes
- Any number of sectors may be written in a single data transfer operation.
- Any write operation may extend beyond the current end-of-file position. The end-of-file is moved to after the last sector actually written, all sectors before the new end-of-file position being allocated.
- Write filemark operations are allowed but are treated as no-operation.

## 8. Extended File Accounts Support

OS/32 6.2 will support specification of file accounts in excess of 255 up to a maximum of 65,535. The high-order bits of the filename are used to indicate accounts greater than 255. Hence, the user must use SVC 2,16 when packing a file descriptor into an SVC7 parameter block.

## 9. Vertical Forms Control (VFC) Support

Full VFC support has been incorporated into the line printer and BIOC, drivers and the Point-to-Point Terminal Manager. The first character in the input/output buffer will be interpreted as a forms control character when VFC is enabled. VFC may be turned on when the device or spool file is assigned or per SVC1 request. VFC may also be specified when the task is linked and then applies to all logical units of the task. For further details see the OS/32 Application Level Reference Manual, Publication Number 48-039 R01, and the OS/32 Supervisor Call (SVC) Reference Manual, Publication Number 48-038 R01.

## 10. LINK R01-00 and the Compatible LINK Utility

LINK R01 contains support for new features including the virtual task manager (VTM) and the Symbolic Debugger. The "Option" command has a new parameter, "ALIGN", which will force included modules to be aligned on halfword, fullword, or doubleword boundaries. A "HELP" command has been implemented to list and/or

describe all LINK commands. "RESOLVE" replaces the "SHARED" command for resolving references to external segments.

For those users needing a means of gradually converting existing LINK command files, the Compatible LINK Utility is provided. This program provides all the new functions and options of LINK R01 with the old command syntax.

The differences between LINK R01 and the Compatible LINK Utility are as follows:

CLU	LINK R01
ESTABLISH SHARED SHARED fd OPTION SYSSPACE=hex# WORK=(hex#,hex#)	ESTABLISH IMAGE RESOLVE fd OPTION SYSSPACE=dec# WORK=(dec#,dec#)
hexadecimal numbers need not be preceded by 'X'	where decimal numbers are expected, a hex# may be entered preceded by 'X'
When not explicitly specified, the default extension for shared segments is '.SEG'	The default extension for shared segments is ' .IMG'

#### NOTE

The Compatible LINK Utility is an interim program only and may not be supported with future releases of OS/32.

### 11. SVC Enhancements

SVCs have been added and made available for customer use.

- o SVC 2 Code 14 - this new SVC allows a user foreground task to pass commands to the OS Command Processor as if they had been entered at the system console.
- o SVC 2 Code 27 - this new SVC has been included to support the virtual task manager. It allows a user task to access and modify its own private segment table. This SVC can only be called by tasks running on MAT machines. Because of its purpose and the sensitive nature involved in modifying the private segment table (PST), this SVC is not recommended for customer use outside of VTAM.
- o SVC 2 Code 29 - this new SVC converts a packed file descriptor from the format of an SVC 7 parameter block or a directory entry to an unpacked format suitable for display or printing.

## 12. OS/32 COPY

COPY/32 has been enhanced with the following features:

- o A "HELP" command for list and/or display of all COPY commands.
- o "FR" and "ER" commands to disc devices are now greatly improved in performance.
- o Comment lines ("\*" in column 1) are supported.
- o An addition to the "OPTION" command specifies a threshold below which the program will automatically continue after verify errors.

## 13. Spooler Enhancements

The current SPOOLER program has been enhanced to allow specification of the volume for the Spool Queue separate from the spool volume. A START parameter has been added to indicate that filenames not found by the SPOOLER be deleted from the Spool Queue. Three new run-time parameters have been added to the ".SPL" command:

- o STATUS - causes the Spooler to display the current status of each input and output device.
- o END - allows the user to bring the SPOOLER to a gradual halt. All devices are suspended after completion of the current operation. Once all devices have halted, the SPOOLER goes to EOT 0.
- o TERMINATE - causes the SPOOLER to stop all operations immediately and go to EOT 2. This method prevents possible corruption of the Spool queue if the program is cancelled.

The OPTION parameter of the START command has six new options:

- o NOBFF - specifies that no form-feed will be issued at the end of the banner page.
- o BFF - is the opposite of "NOBFF" and is the default option.
- o NOTFF - specifies that no form-feed will be issued at the end of printing a file.
- o TFF - is the opposite of "NOTFF" and also the default option.
- o AUTOCONTINUE - causes the SPOOLER to periodically poll any output device that has become "NOT READY" to check if it has been made ready. If "READY" is detected, the program will automatically continue the output that was in progress.

- o **NOAUTOCONTINUE** - the SPOOLER will wait for entry of a "CONTINUE" command from the user before resuming output to a stopped device. This option is opposite to AUTOCONTINUE and is the default.

Options are specified and maintained for both real and pseudo-devices. Options applicable to a particular print-out are determined when the actual output is begun and last only for the duration of the output.

If the user is using a device for printed output from the SPOOLER that has a physical record length of less than 110 characters, the program will output the banner page using a narrow width. This narrow format is 55 characters wide but contains all the information of the full-width banner format.

The existing "INQUIRE" command has been enhanced to give more information regarding the Spool Queue and also more flexibility in requesting that information. Displaying from a large spool queue onto a slow speed device will no longer degrade other devices controlled by the spooler. The "INQUIRE" has four parameters:

- o **TASK** = This parameter allows the user to inquire about queue entries with taskid's matching the specified parameter. The capability is present to select generic taskid's in the same manner as specifying filenames for BACKUP selection (see the OS/32 System Support Utilities Reference Manual, Publication Number 48-031 R01, Chapter 2, pages 5-11.)
- o **ACCOUNT** = This parameter allows the user to select only queue entries with file account numbers matching the specified parameter.
- o **DEVICE** = This parameter allows the user to enquire about all queue entries for a specified pseudo-device.
- o **LIST** = This parameter gives the user the capability to direct the output of the "INQUIRE" command to an fd other than the system console. If this parameter is omitted all output is sent to the system console.

#### 14. FASTBACK

FASTBACK is a high performance tape-to-disc, disc-to-tape backup utility designed for data protection of disc files. It offers:

- o Command entry flexibility
- o Comprehensive file selection
- o Optional buffer size selection
- o ANSI standard tape labels

#### NOTE

FASTBACK is NOT a replacement for BACKUP.

## 15. PENnet Support

OS/32 supports the X.25 network software product, PENnet. OS 6.2 may be generated to support PENnet using either SYSGEN32 or CUPMT by specifying device code 177, ZBID QSA SMPLX type devices. The current spooler (03-152 R02-03) must be used in conjunction with PENnet when input-output spooling is required. A detailed explanation regarding installation of PENnet is included in the PENnet Software Package Reference Document, Publication Number, 04-166M95R00.

## 16. Highlights of Utility program changes:

- o The following utilities have been changed to support the new file types:
  - BACKUP, COPY32, DISCDUMP, DISCHECK, FASTCHEK
- o SYSGEN32 and CUPMT have been changed to support the generation of OS's for SPL/32, PENnet, and 3270 Support.
- o Most utilities now utilize the CAL "DCMD" operator to specify LINK options. LINK R01 is required to re-link these utilities.
- o The following programs have been changed to support 65K file accounts:
  - DISCDUMP, DISCHECK, BACKUP, FASTCHEK, COPY32

## 17. Maintenance

Over 220 separate software change resolutions (SCRs) have been incorporated into OS/32 and all its constituent parts.

APPENDIX D  
DATA STRUCTURE CHANGES

Any user software, including drivers, which uses any of the following structures must be re-expanded, re-assembled, and re-linked.

1. SYSSTRUC.MLB:

- o \$SOPT - System Options
  - SOPT.CSB and SOPT.CSM - Bit definition and access masks for commercial spooler support
  
- o \$DCB - Device Control Block
  - DCB.VFC - address of VFDCB
  - DCB.XFNM
  
- o \$TCB - Task Control Block
  - TCB.ADCK - Last Program Address Checked
  
- o \$TOPT - Task Options
  - TOPT.DBB and TOPT.DBM - DEBUG/32 support specified
  
- o \$TSTT - Task Status
  - TSTT.IWB and TSTT.IWM - Task in ITAM RS I/O WAIT
  
- o \$DIR - Disc Directory Entry
  - DIR.SHDS - Shared disc support
  - DIR.LASN - Date file last assigned
  - DIRA.ACB - Bit definition of an active file
  
- o \$FCB - File Control Block
  - FCB.MSG - Start of ATF SVC6 parameter block
  - FCB.ATF - Start of ATF message buffer
  
- SFFLG - FCB Flags

- FDCD.EC - device code for extendable contiguous file
  - FDCD.NB - Device code for non-buffered indexed file
  - FOCD.HI - Highest defined file type
  - FDCD.IT - Data Comm ICB
  - FDCD.DEV - First physical device code
- o **SDFLG - Device Control Block Flags**
- DFLG.MGB and DFLG.MGM - Bit definition and access mask for mag tape device
- o **SSIXO - SVC1 Extended Options**
- SIXO.LCB and SIXO.LCM - Bit definition and access mask for line connect
  - SIXO.LDB and SIXO.LDM - Bit definition and access mask for line disconnect
  - SIXO.FMB and SIXO.FMM - Bit definition and access mask for ASCII formatted I/O
- o **SSVC7 - SVC7 Parameter Block Definition**
- Command Masks:**
- SV7.ALLO - ALLOCATE
  - SV7.ASGN - ASSIGN
  - SV7.CNGP - CHANGE ACCESS PRIVILEGES
  - SV7.RNAM - RENAME
  - SV7.REPR - REPROTECT
  - SV7.CLOS - CLOSE
  - SV7.DELE - DELETE
  - SV7.CKPT - CHECKPOINT
- File Types:**
- SV7.CONT - Contiguous
  - SV7.ECNT - Extendable contiguous
  - SV7.INDX - Indexed
  - SV7.NBIX - Non-buffered indexed
- Access Privileges:**
- SV7.SRO - Shared read only
  - SV7.ERO - Exclusive read only
  - SV7.SWO - Shared write only
  - SV7.EWO - Exclusive write only
  - SV7.SRW - Shared write only
  - SV7.ERW - Exclusive read write
  - SV7.SREW - Shared read-exclusive write
  - SV7.ERSW - Exclusive read-shared write



**Mag Tape Density Select:**

SV7.800 - Low-800 BPI  
SV7.1600 - Medium-1600 BPI  
SV7.6250 - High-6250 BPI

o **\$SPOL - Spool File Send Message Definition**

SPOL.PCH - Punch indicator  
SPOL.DEL - Delete indicator

o **\$UDL - User Dedicated Locations Definition**

UDL.LMSA - MAT fault 'load multiple' start address

o **\$GERC - General Error Recording**

ERCF.ERL EQU 5 - I/O retry limit for error log file

**2. New Macros (SYSSTRUC.MLB):**

o **\$HB - define control block used when calling HELP shared segment.**

o **\$WAP - defines the structure of the RESTRICTED/SYSTEM volume access bit map**

o **\$SSD - defines structure of SVC6 Send Data buffer**

o **\$SPLMSG - defines structure of messages to SPL/32**

**3. ITMS.MLB:**

o **\$IDCB - ITAM device control block**

DCB.BSB  
DCB.BSE  
DCB.T01 - Time out 1  
DCB.T02 - Time out 2 (operator response time)

o **\$BDCB - Bisynchronous device control block**

DCB.PCCB - Address of prepare CCB

- o SS1125DCB
  - DCB.TDCT - Renamed from DCB.LDCT due to conflict with other code
  
- o SITCRASH - ITAM crash code definition
  - ITC.812 - DIOS failure on non-data-comm device
  - ITC.825 - BSC 3270 emulator crash
  - ITC.865 through ITC.885 - 3270 support crashes
  
- o SITB
  - ITB.PAWB and ITB.PAWM - Bit definition and access mask for prepare after write
  
- o SITF
  - ITF.PAWB and ITF.PAWM - Bit definition and access mask for prepare after write
  
- o SIST
  - IST.SP3B and IST.SP3M - Bit definition and access mask for special character 3 meaning EOT received

4. New Macros (ITMS.MLB):

- o FMH - generated the file manager handler table
  
- o AOBDCB - combination of asynchronous or bisynchronous DCB generator for SYSGEN32

APPENDIX E  
KNOWN PROBLEMS/AVOIDANCE PROCEDURES

1. Series 3200 2K LSU Boot Loader

The Series 3200 2K LSU Boot Loader will not load an OS/32 image from magnetic tape at 6250 BPI.

2. Series 3200 8K LSU Boot Loader

When using the 'OTHR' option for 6250 tape drives, the device code must be entered in decimal (68).

3. Magnetic Tape Driver

A. The supplied magnetic tape driver will not support drives operating under the special 1600 BPI tape controller (#99-690). If it is not possible to replace this controller, please re-assemble the driver supplied with OS/32 R06-01 and use it.

B. Under the R06-01 magnetic tape driver, there was a software fix installed to prevent the CPU being tied up and locking the users out while "Forward Space Record" was in progress. Under R06-02, this software fix has been removed because there are engineering change notices (ECNs) available for the hardware.

On 6250 BPI drivers, two controller problems have ECN fixes; the first involves incorrect error detection. If the ECN is not installed, data transfer errors may be reported as partial reads (status=X'8301') rather than as recoverable errors (status=x'82FA'). The second involves the Ignore Data Transfer Errors Read function. Without the necessary ECN, encountering a parity error may terminate the data transfer rather than continuing until the entire record has been read.

The following ECNs should therefore be installed:

Tape Drive	ECN Number
800 BPI	4695
1600 BPI	4973
800/1600 BPI	4945
800/1600/6250 BPI	5346

The user should make certain that the proper ECN is installed for his configuration.

#### 4. TEXT/32

Users with TEXT32 R00-03 should copy from their OS/32 6.1 system pack, HELPR06.SEG and EDIT32S.SEG to their OS/32 6.2 system pack. TFXT32 requires these segments to run properly and will not interface with the 6.2 versions. TEXT must not be re-linked with the 6.2 segments. This incompatibility will be resolved with the next release of TEXT.

#### 5. Problems encountered by Product Assurance & Control (PAC) against OS/32 6.2:

- o Re-linking the Help Shared Segment will result in two warning messages and LINK going to end-of-task (EOT) code 2. These messages may be ignored; the resulting image will work properly with no adverse affect on any other component in the OS/32 package.
- o Using the Multi-Terminal Monitor (MTM) (03-151 R06-02) and adding the system console as an MTM terminal will cause problems when interactive programs such as COPY32 or EDIT32 are executed. An avoidance procedure is to specify the BIOC driver for the SYSGEN device statement for the system console and that image reads terminate on carriage return. For example:

CON: 010,39,XDC=X2A0D,CONSOLE

- o Under device code 156 across a switched-line connection, an extra character will appear on some lines of output from Edit32. This is a cosmetic difficulty only and will have no effect on the user's entry or files.

APPENDIX F  
TABLES OF OBJECT LIBRARIES

1. Basic Data Communications Driver Library:

DCB144	DCB156	DCB168	INITCSYC
DCB145	DCB157	DCB192	INITPSM
DCB146	DCB158	INITDASY	INITMSM
DCB147	DCB160	INITDIOS	INITMASY

2. Basic Data Communications System Library

ITFM.M00	HSUP	BAOP.TOP	ASORW.XT
ITFM.M01	INITMSUP	BAEP.TOP	ASERW.XT
ITAM.M01	ADIOSTOP	ASYNCHTOP	BDIOSPLS
IOH.XASY	BDIOSTOP	BDIOSE2A	DL2U.XLT
IOH.SVCF	BEBC.TOP	BEBC.EBC	L2UC.XLT
			BSPCLS

3. General Purpose Driver Library

DCB016	DCB059	DCB084	DCB136
DCB017	DCB060	INITTYRP	DCB137
DCB018	DCB061	DCB096	INITRTAS
DCB021	DCB062	DCB097	DCB138
DCB022	DCB063	DCB098	INITAIDV
DCB023	DCB047	INITCARD	DCB139
INITTYKP	DCB046	DCB104	INITAODV
INITYKH	DCB045	DCB105	DCB140
INITYKX	DCB044	DCB106	INITDIOV
DCB034	INITMMD	INITCDRP	INITVFCS
DCB036	INITDCM	INITPA29	INITSUBS
DCB037	DCB055	INITPE29	DCB034
DCB038	INITFLPY	INITPA26	DCB036
DCB039	DCB064	INITPE26	DCB037
DCB040	DCB065	INITRA29	DCB038
INITBIOC	DCB068	INITRA26	DCB039
DCB048	DCB069	INITRE29	INITCRT
DCB049	DCB070	INITRE26	INITCRTH
DCB050	INITMAGS	DCB001	INITCRTX
DCB051	INITM62E	DCB112	
DCB052	DCB066	DCB113	
INITMHD	INITCASS	DCB114	
DCB053	DCB080	INITLPTR	
DCB054	INITPTRP	DCB128	
DCB056	DCB081	INITL8	
DCB057	DCB082	DCB129	
DCB058	DCB083	INITDMUX	

#### 4. OS/32 System Library

EXEC.F01  
CDVR.F01  
CMDB.F31  
CMDB.F32  
CMDB.F33  
CMEX.F33  
CMIR.F01  
CMIR.F02  
CMON.F01  
CMSP.F33  
ERRC.F01  
ERRC.F02  
ERRC.F03

EXAC.F01  
EXAC.F02  
EXAC.F03  
EXIN.F51  
EXIN.F53  
EXIO.F01  
EXIO.F02  
EXLD.F50  
EXLD.F51  
EXLD.F52  
EXLD.F53  
EXMY.F52  
EXMY.F53

EXSP.F51  
EXSP.F53  
EXSV.F01  
EXSV.F52  
EXSV.F53  
EXTI.F01  
EXTI.F02  
EXTM.F52  
EXTM.F53  
FLTP.F02  
FLTP.F03  
FLTP.F04  
FMCO.F33

FMIN.F33  
FMNB.F33  
FMS7.F31  
FMS7.F33  
FMS7.F34  
FMUT.F31  
FMUT.F32  
FMUT.F33  
INTC.F01  
INTC.F02  
MCHK.F01  
MCHK.F02  
DUMP.F01

APPENDIX G  
STARTER SYSTEM MAPS

The following pages contain the CUPMT input statements and Library Loader map for STARTER1.

The following are OS/32 6.2 DCB offsets for non-standard ADR modifications:

<u>DCB Tag</u>	<u>Offset</u>	<u>Content Description &amp; Length</u>
DCB.DN	X'1A'	Device Number            HW
DCB.SDN	X'9C'	Sech Device Number    HW
DCB.CDN	X'9E'	Controller Device Number                    HW
DCB.STRT	X'B0'	Sectors/track            HW
DCB.TCYL	X'B2'	Tracks/Cylinder        HW
DCB.SIZE	X'90'	No. of Sectors on Disk                    FW

PERKIN-ELMER SYSGEN/32 03-356 R00-01  
COPY

MCALL DCBI,CCBI,CONVNUM,EVNGEN  
MCALL MMDGEN,MTPI

ENDCOPY

VERSION OS32MTS1

CPU 8/32,8

MEMORY 1024

DSYS 50

MEMCHECK

DEVADS 3

FLOAT S,S

CLOCK 60,6C,6D,D

BACKGROUND 16,50

VOLUME MT6A

TEMP MT6A

DIRECTORY

DISCBLOCK 32

CSS 8

CMDLEN 100

LOGLEN 100

DEVICES

CON: , 2,16,CONS

CRT: ,12,39,XDCOD=X2AOD

CR: , 4,96

PR: ,62,113

CAS1: ,45,66

CAS2: ,55,66

FLP1: ,C1,55,SPINDLE=0

FLP2: ,C1,55,SPINDLE=1

MAG1: ,85,64,SELCH=FO,CONTR=0

MAG2: ,C5,65,SELCH=FO,CONTR=1

MAG3: ,85,68,SELCH=FO,CONTR=2

MAG4: ,85,69,SELCH=FO,CONTR=3

MAG5: ,85,70,SELCH=FO,CONTR=4

DSC0: ,C8,49,SELCH=FO,CONTR=B6

DSC1: ,C6,51,SELCH=FO,CONTR=B6

DSC2: ,C7,50,SELCH=FO,CONTR=B6

DSC3: ,FC,52,SELCH=FO,CONTR=FB

DSC4: ,FC,53,SELCH=FO,CONTR=FB

DSC5: ,FC,54,SELCH=FO,CONTR=FB

ENDD

ENDC

\*OS32MTS1 SYSTEM 03-120F01

\*CPU = 7/32 OR 8/32

\*MEMORY = 1024-KB

\*SYSTEM SPACE = 50-KB

\*MEMORY DIAGNOSTICS INCLUDED

\*MAX OF 1023 DEVICES IN SYSTEM

\*FLOATING POINT SOFTWARE SUPPORT

\*60-HZ, LFC=6C, PIC=6D, DISPLAY TIME

\*BACKGROUND TASK'S PRIORITIES

\*DEFAULT SYSTEM VOLUME

\*DEFAULT TEMPORARY VOLUME

\*CORE DIRECTORY INCLUDED

\*DISCFILE BLOCKING FACTOR=32 SECT.

\*CSS NESTING DEPTH

\*COMMAND BUFFER LENGTH = 100 BYTES

\*LOG BUFFER LENGTH = 100 BYTES

\*CONSOLE - M33 TTY

\*PE 550/PE 1100

\*CARD READER

\*300-LPM LINE PRINTER

\*CASSETTE NO 1

\*CASSETTE NO 2

\*FLOPPY DISC-1

\*FLOPPY DISC-2

\* 800-BPI TAPE

\*1600-BPI TAPE

\*6250-BPI TAPE HPTD-125 CONTROLLER

\*6250-BPI TAPE STC CONTROLLER

\*6250-BPI TAPE TELEX CONTROLLER

\*2.5-MB DISC (REMOVEABLE)

\* 5-MB DISC (REMOVEABLE)

\* 5-MB DISC (FIXED)

\* 40-MB DISC (REMOVEABLE)

\* 67-MB DISC (REMOVEABLE)

\*256-MB DISC (REMOVEABLE)



FILE NAME: M67A:OS32MTS1.OS/140 -- PACKAGE NAME: OS32MTS1.OS -- RECORDS: 633

UBOT: 0 -- UTOP: 276B0 -- CTOP: 276FE -- SIZE: 157.75 KB

NODE MAP:

LEVEL	NAME	LENGTH	PURE	IMPURE	COMMON	TABLES
0	.ROOT	276B0	3730	23F80	0	0
	(TOTALS)	276B0	3730	23F80	0	0

VIRTUAL ADDRESS MAP:

FROM	TO	SEGMENT NAME	SIZE	ACCESS
000000	0276FF	.ROOT	157.75 KB	RWE

NODE: .ROOT - LEVEL: 0 - ADDRESS: 0 - SIZE: 276B0 - PARENT:

SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS
E-SCTT	000000-A	E-SCTH	000000-A	E-SPT	000060-A
P-SPTINIT	000000-P	E-ISPTAB	0000D0-P	P-DCBS	000A00-P
E-CCB1600	000A00-P	E-CCB3900	000A1C-P	E-CCX3900	000A38-P
E-CCB9600	000A5C-P	E-CCB11300	000A78-P	E-CCR6600	000A94-P
E-CCB6601	000AB0-P	E-CCBFLP1	000ACC-P	E-CCB5500	000ACC-P
E-CCBFLP2	000AE8-P	E-CCB5501	000AE8-P	E-CCBMAG1	000B04-P
E-CCB6400	000B04-P	E-CCB6500	000B20-P	E-CCB6800	000B3C-P
E-CCB6900	000B58-P	E-CCB7000	000B74-P	E-CCBDSCO	000B90-P
E-CCB4900	000B90-P	E-CCBDSC1	000BAC-P	E-CCB5100	000BAC-P
E-CCBDSC3	000BC8-P	E-CCB5200	000BC8-P	P-EVNGEN	000BF0-P
E-MMASPSW	000BF0-P	E-MMASREG	000BF8-P	E-REGBIAS	000DF8-P
P-INITTYKP	000E60-P	E-ISR1TYKP	000E60-P	E-TYKPHMRK	000FC0-P
E-TYKPCR	000FC8-P	E-TYKPBARW	000FDA-P	P-INITYKX	000FF0-P
P-INITBIOC	001010-P	E-BIO.PPTO	0022F0-P	E-BIO.OCIV	0022F2-P
P-INITMHD	002300-P	P-INITMMD	0023F0-P	E-ISR1MMD	0023F0-P
E-ISR2MMD	002410-P	E-ISR3MMD	0024A0-P	E-ISR4MMD	0024D8-P
P-INITFLPY	002530-P	P-INITMAGS	002760-P	E-ISMAG1	002760-P
E-ISRERS	002912-P	E-ISRCOM	00293E-P	E-ISREXIT	002968-P
E-SETTOUT	00297A-P	P-INITM62E	002A10-P	E-ISM62E	002A10-P
P-INITCASS	002E50-P	P-INITCARD	003120-P	P-INITLPTR	003350-P
E-ISRLPTR	003350-P	P-INITSUBS	003420-P	P-EXIN.F51	003450-P
P-EXTI.F01	003710-P	E-ISRPIIC	003710-P	E-ISRLFC	003716-P
E-III	00371C-P	P-SPTINIT	003730-I	E-SPT.INIT	003730-I
E-SPT.CRSH	003736-I	E-SPT.FLV	003738-I	E-SPT.LLV	00373C-I
E-SPT.MLBL	003740-I	E-SPT.CTSP	003742-I	E-SPT.CSLV	003744-I
E-SPT.CSBF	003748-I	E-SPT.CHBK	00374C-I	E-SPT.ISPT	00374E-I
E-SPT.CTOP	003750-I	E-SPT.UTOP	003754-I	E-SPT.UBOT	003758-I
E-SPT.PMEM	00375C-I	E-SPT.MTOP	003760-I	E-SPT.OSID	003764-I
E-SPT.IVT	00376C-I	E-SPT.TTAB	003770-I	E-SPT.MTM	003774-I
E-SPT.NTCB	003775-I	E-SPT.60	003776-I	E-SPT.DMT	003778-I
E-SPT.VMT	00377C-I	E-SPT.SVOL	003780-I	E-SPT.SPVL	003784-I
E-SPT.RVOL	003788-I	E-SPT.TVOL	00378C-I	E-SPT.SNOD	003790-I
E-SPT.JRNL	003794-I	E-SPT.FREQ	003798-I	E-SPT.PIC	00379A-I
E-SPT.LFC	00379C-I	E-SPT.CPU	00379E-I	E-SPT.SOPT	0037A0-I
E-SPT.VERN	0037A4-I	E-SPT.CLSS	0037AC-I	E-SPT.SSTE	0037B0-I
E-SPT.SSTS	0037B2-I	E-SPT.ADCK	0037B4-I	E-SPT.ADK1	0037B8-I
E-SPT.MNTH	0037CC-I	E-SPT.DATE	0037CC-I	E-SPT.DAY	0037CE-I
E-SPT.YEAR	0037D0-I	E-SPT.TSL	0037D2-I	E-SPT.TIME	0037D4-I
E-SPT.DTHD	0037D8-I	E-SPT.TQHD	0037DC-I	E-SPT.IQHD	0037E0-I
E-SPT.RTLS	0037E4-I	E-SPT.TCMS	0037E8-I	E-SPT.SCTH	0037EC-I
E-SPT.SCTT	0037F0-I	E-SPT.OSUP	0037F4-I	E-SPT.PANC	0037F8-I
E-SPT.PSV	0037FC-I	E-SPT.RSV	003804-I	E-SPT.TSV	003808-I
E-SPT.AFSV	00380C-I	E-SPT.SCL	003824-I	E-SPT.FLST	003828-I
E-SPT.FSYP	00382C-I	E-SPT.RTCB	003834-I	E-SPT.RDCB	003838-I
E-SPT.SPCT	00383C-I	E-SPT.EDMA	003840-I	E-SPT.EMHD	003844-I
E-SPT.EMTL	003848-I	E-SPT.CTCB	00384C-I	E-SPT.UTOW	003850-I

SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS
E-SPT.RSOW	003854-I	E-SPT.ESOW	003858-I	E-SPT.MCOW	00385C-I
E-SPT.EFOW	003860-I	E-SPT.DFOW	003864-I	E-SPT.RSON	003868-I
E-SPT.RSOF	00386C-I	F-SPT.RLIO	003870-I	E-SPT.VALU	003878-I
E-SPT.HLDA	00387C-I	E-SPT.HLDB	003880-I	E-SPT.PAGE	003884-I
E-SPT.SCLP	003888-I	E-SPT.ADDM	00388C-I	E-SPT.OFFM	003890-I
E-SPT.PAGM	003894-I	E-SPT.SEGM	003898-I	E-SPT.CPID	00389C-I
E-SPT.CPIE	0038A0-I	E-SPT.MISS	0038A4-I	E-SPT.NODE	0038A8-I
E-SPT.PSDD	0038B0-I	E-SPT.PSDT	0038B4-I	E-SPT.QH	0038B8-I
E-SPT.TID	0038BC-I	E-SPT.PID	0038C0-I	E-SPT.IPID	0038C2-I
E-SPT.ERBL	0038C4-I	E-TCBTAB	0038DC-I	E-SPT.STCB	0038E0-I
E-SPTTAG	003968-I	E-CMDPTCB	003C60-I	E-PTRSTACK	003F54-I
E-CMDBUFFS	003F80-I	E-LGMBUFF	00440C-I	P-DMTINIT	004480-I
E-DMTNULL	004480-I	E-DMT	004480-I	E-DMT.CON	004488-I
E-DMT.CRT	004490-I	F-DMT.CR	004498-I	E-DMT.PR	0044A0-I
E-DMT.CAS1	0044A8-I	E-DMT.CAS2	0044B0-I	E-DMT.FLP1	0044B8-I
E-DMT.FLP2	0044C0-I	E-DMT.MAG1	0044C8-I	E-DMT.MAG2	0044D0-I
E-DMT.MAG3	0044D8-I	E-DMT.MAG4	0044E0-I	E-DMT.MAG5	0044E8-I
E-DMT.DSC0	0044F0-I	E-DMT.DSC1	0044F8-I	E-DMT.DSC2	004500-I
E-DMT.DSC3	004508-I	E-DMT.DSC4	004510-I	E-DMT.DSC5	004518-I
P-DCBS	004530-I	E-DCB1600	004530-I	E-DCB.CON	004530-I
E-DCB3900	0045CC-I	E-DCB.CRT	0045CC-I	E-DCB9600	0047E4-I
E-DCB.CR	0047E4-I	E-DCB11300	004880-I	E-DCB.PR	004880-I
E-DCB6600	0049A4-I	E-DCB.CAS1	0049A4-I	E-DCB6601	004A40-I
E-DCB.CAS2	004A40-I	E-DCB5500	004ADC-I	E-DCB.FLP1	004ADC-I
E-DCB5501	004E78-I	E-DCB.FLP2	004E78-I	E-DCB6400	005214-I
E-DCB.MAG1	005214-I	E-DCB6500	0053D4-I	E-DCB.MAG2	0053D4-I
E-DCB6800	005594-I	E-DCB.MAG3	005594-I	E-DCB6900	005754-I
E-DCB.MAG4	005754-I	E-DCB7000	005914-I	E-DCB.MAG5	005914-I
E-DCB4900	005AD4-I	E-DCB.DSC0	005AD4-I	E-DCB5100	005E70-I
E-DCB.DSC1	005E70-I	E-DCB5000	00620C-I	E-DCB.DSC2	00620C-I
E-DCB5200	0065A8-I	E-DCB.DSC3	0065A8-I	E-DCB5300	006944-I
E-DCB.DSC4	006944-I	E-DCB5400	006DBC-I	E-DCB.DSC5	006DBC-I
P-EVNGEN	007260-I	E-VMT	007260-I	E-VMT.FLP1	007264-I
E-VMT.FLP2	00726C-I	E-VMT.DSC0	007274-I	E-VMT.DSC1	00727C-I
E-VMT.DSC2	007284-I	E-VMT.DSC3	00728C-I	E-VMT.DSC4	007294-I
E-VMT.DSC5	00729C-I	E-LFCON	0072A8-I	E-LF1600	0072A8-I
E-LF.FIRST	0072A8-I	E-EVT	0072A8-I	E-DMLV	0072D4-I
E-TIMELV	007300-I	E-PWLV	00732C-I	E-PICLV	007358-I
E-SLICELV	007384-I	E-LOADLV	0073B0-I	E-CBUFLV	0073DC-I
E-LFCRT	007408-I	E-LF3900	007408-I	E-LFCR	007434-I
E-LF9600	007434-I	E-LFPR	007460-I	E-LF11300	007460-I
E-LFCAS1	00748C-I	E-LF6600	00748C-I	E-LFFLP1	0074B8-I
E-LF5500	0074B8-I	E-BIT5500	0074E4-I	E-DIR5500	007510-I
E-BIT5501	00753C-I	E-DIR5501	007568-I	E-LFMAG1	007594-I
E-LF6400	007594-I	E-LFMAG2	0075C0-I	E-LF6500	0075C0-I
E-LFDSCO	0075EC-I	E-LF4900	0075EC-I	E-BIT4900	007618-I
E-DIR4900	007644-I	E-LFDSC1	007670-I	E-LF5100	007670-I
E-BIT5100	00769C-I	E-DIR5100	0076C8-I	E-BIT5000	0076F4-I

SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS
E-DIR5000	007720-I	E-LF5200	00774C-I	E-LF5200	00774C-I
E-BIT5200	007778-I	E-DIR5200	0077A4-I	E-BIT5300	0077D0-I
E-DIR5300	0077FC-I	E-BIT5400	007828-I	E-LF.LAST	007854-I
E-DIR5400	007854-I	E-C000	007880-I	E-C100	0078AC-I
E-C200	0078D8-I	E-C300	007904-I	E-C400	007930-I
E-CB600	00795C-I	E-CFB00	007988-I	E-SF000	0079B4-I
E-IVTBL	0079E0-I	E-SQ	007A08-I	E-INITCMD	007A7C-I
P-INITTYKP	007A80-I	E-INITTYKP	007A80-I	E-TERMTYKP	007BDE-I
E-TYKP.IOH	007C28-I	P-INITYKX	007C70-I	E-INITYKX	007C70-I
P-INITBIOC	007E70-I	E-INITBIOC	007E70-I	E-BIOC.ID	007E8C-I
E-TERMBIOC	008364-I	E-BIOC.IOH	0084FC-I	E-XLTBIOC	00872C-I
E-XLTPECRT	00876C-I	E-XLTBIOC2	0087AC-I	P-INITMHD	008840-I
E-INITMHD	008840-I	E-SINITMHD	008858-I	E-TERMMHD	008A40-I
P-INITMMD	008DA0-I	E-INITMMD	008DA0-I	E-SINITMMD	008DB8-I
E-TERMMMD	0092A0-I	E-ESR1MMD	0092A0-I	E-ESR2MMD	0092E4-I
E-ESR3MMD	009308-I	E-ESR4MMD	009610-I	E-ESR5MMD	009674-I
E-MMDIOH	0096B0-I	P-INITFLPY	009720-I	E-INITFLPY	009720-I
E-SINITFLP	009740-I	E-CMDFLP	0097FA-I	E-TERMFLP	009800-I
P-INITMAGS	009850-I	E-INITMAGS	009850-I	E-LIKSTACK	009948-I
E-TERMMAGS	0099CC-I	F-WRITEM	009A66-I	E-CMDMAGS	009BE4-I
E-REWINDT	009C70-I	E-FSR	009CA2-I	E-FSRPRIM	009CD6-I
E-BSR	009D6A-I	F-BSRPRIM	009DA2-I	E-BFM	009E7C-I
E-FFM	009F1C-I	E-WFM	009FBA-I	E-ERASE	00A1E2-I
E-ERASE1	00A2D0-I	E-ESRERS	00A312-I	E-ESRTOU	00A374-I
E-CHECKDU	00A384-I	E-STATUS	00A39C-I	E-FIREIO	00A40A-I
E-DIRREGS	00A430-I	E-REGS	00A454-I	E-FIRECMD	00A464-I
E-CMDSCAN	00A488-I	E-EOFTEST	00A4A8-I	E-EOTTESTF	00A4FE-I
E-TESTRDY	00A514-I	E-BOTCHECK	00A528-I	E-CRASH	00A630-I
E-GOPULL	00A636-I	E-CHCKDDPS	00A6C2-I	E-GOWAIT	00A6E6-I
E-ERRDU	00A742-I	E-ERRRECOV	00A74C-I	E-ERRUNREC	00A756-I
E-MTPUNCVR	00A76A-I	E-MTPTOUT	00A776-I	E-MTPRCVRB	00A782-I
E-ERROR	00A7B0-I	E-IOH6250	00A7D4-I	P-INITM62E	00A8B0-I
E-INITM62E	00A8B0-I	E-TERM62E	00AA12-I	E-CMDM62E	00B004-I
P-INITCASS	00B340-I	E-INITCASS	00B340-I	E-CMDCASS	00B422-I
E-TERMCASS	00B47C-I	P-INITCARD	00B4E0-I	E-INITCARD	00B4E0-I
E-CARDHARD	00B592-I	E-TERMNCRD	00B614-I	P-INITRA29	00B640-I
E-INITRA29	00B640-I	P-INITLPTR	00B740-I	E-INITLPTR	00B740-I
E-TERMLPTR	00B9EE-I	E-IOHLP	00BACC-I	P-INITVFCS	00BB20-I
E-INITVFCS	00BB38-I	E-VFCLFPND	00BB6A-I	E-VFCLFPIS	00BB78-I
E-VFCDIR	00BB86-I	E-VFCNEXTA	00BDF8-I	E-VFCIGNOR	00BF70-I
E-VFC.SPB	00BFE4-I	E-VFC.LFB	00C068-I	E-VFC.FFB	00C0B8-I
E-VFC.VTB	00C0BC-I	P-INITSUBS	00C0C0-I	E-INITSUBS	00C0C0-I
E-ISRTOU	00C0D8-I	E-ISRLEAVE	00C0E4-I	E-WRTSELRD	00C0EA-I
E-WRTSELWT	00C112-I	E-RDSELCH	00C130-I	E-ENDSCAN	00C154-I
E-ENDSCAN1	00C18E-I	E-MAXLNTH	00C1DE-I	E-SETISP	00C1EE-I
E-SETISPS	00C200-I	E-DIREXIT	00C206-I	E-GETBUFF	00C214-I
E-SETBUFF	00C220-I	E-TESTVFC	00C22A-I	E-VFCTLT	00C234-I
E-VFUTLT	00C300-I	E-TABSCAN	00C352-I	E-VFUTLTCH	00C368-I

SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS
E-GETBUFCH	00C37C-I	E-SETHTAB	00C386-I	E-SETVTAB	00C3EC-I
E-RESETAB	00C4E6-I	E-RESETBTS	00C52C-I	E-CNVNUM	00C538-I
E-RSTVTALL	00C5B0-I	E-RSTVT	00C5B8-I	E-DOWNLD	00C6A0-I
E-TOFBUF	00C7B4-I	E-TOFLFS	00C7B7-I	E-LFSET	00C7B8-I
E-SPSET	00C810-I	E-VTBUF	00C860-I	E-GENXLATE	00C864-I
P-CDVR.F01	00CA70-I	F-CDVR.F01	00CA70-I	E-SVC2.7	00CA84-I
E-CIOINCPT	00CB4E-I	E-EXECMSG	00CBAC-I	E-CDSV27	00CCDF-I
E-CDEXTM	00CD12-I	E-CDESV3	00CD26-I	E-CDFUTB	00CD44-I
E-CDEXMY	00CD54-I	E-CDEXIN	00CD92-I	E-CONDVR	00CDE0-I
E-DCBCMD	00CF24-I	E-IOHCDVR	00CFBC-I	P-CMDB.F33	00D000-I
E-CMDB.F33	00D000-I	E-DSPFHD	00D014-I	E-TEMPFILE	00D016-I
E-SPOLFILE	00D176-I	E-DISPLAY	00DCDA-I	E-LUTST	00DF9A-I
E-DISPFD	00E4D0-I	E-CHECK.ID	00E7FE-I	E-CHECKID	00E802-I
E-SVC7PBLK	00E84C-I	E-DEBUGNPR	00ED72-I	E-WFILE	00ED8C-I
E-FFILE	00ED92-I	E-FORREC	00ED98-I	E-BFILE	00ED9E-I
E-BACREC	00EDA4-I	E-REWIND	00EDAA-I	E-MOFFBLK	00F004-I
E-MONBLK	00F166-I	E-RVOLUME	00FC64-I	E-VOLUME	00FE40-I
E-XDELETE	0100B6-I	E-CMDELETE	0100BA-I	E-XALLOCAT	01013E-I
E-ALLOCATE	0101E0-I	F-DISPIND1	010CB0-I	E-DISPIND2	010CB2-I
E-DIRFN	010CBC-I	E-DIREXT	010CC4-I	E-SECTORBF	010D88-I
P-CMEX.F33	010E90-I	E-CMEX.F33	010E90-I	E-CONTINUE	010EA4-I
E-TASKERR	010EFC-I	E-START	010F4C-I	E-CANCEL	010FD2-I
E-BIAS	011010-I	E-WRITE	011092-I	E-NOPRERR	011098-I
E-READ	01112E-I	E-READCMDF	011232-I	E-SEQERR	011328-I
E-MEMORY	011394-I	E-MEMERR	0114CA-I	E-OPTIONS	0114E4-I
E-SET	0115AE-I	E-TASK	0118A4-I	E-PAUSE	011CEC-I
E-CMCLOSE	011D3E-I	E-CMRENAME	011E06-I	E-REPROTEC	011ECA-I
E-ASSIGN	011F22-I	E-LUERROR	011F46-I	E-ASGNERR	0120F8-I
E-FDERROR	012130-I	E-CMDASGN1	012252-I	E-CMDCLOSE	012270-I
E-MARK	01227A-I	E-SEND	012520-I	E-.SPL	012558-I
E-.MTM	01256C-I	E-BUILD	0127E8-I	E-\$BUILD	012808-I
E-BUILD DSP	012812-I	E-\$JOB	01284C-I	E-\$SKIP	01288A-I
E-SEXIT	0128B4-I	E-\$CLEAR	012902-I	E-\$TERMJOB	012942-I
E-\$TRANS	01297C-I	E-\$IFG	0129BA-I	E-\$IFL	0129C6-I
E-\$IFE	0129D2-I	E-\$IFNG	0129DE-I	E-\$IFNL	0129EA-I
E-\$IFNE	0129F6-I	E-\$IFNULL	012A02-I	E-\$IFNULL	012A1A-I
E-\$IFX	012A30-I	E-\$IFNX	012A3A-I	E-\$ELSE	012A8A-I
E-\$ENDC	012ABA-I	E-\$WRITE	012ADE-I	E-\$COPY	012B2E-I
E-\$NOCOPY	012B3A-I	E-GETFRAC	012B3E-I	E-SPT.UTCB	012EE0-I
E-CMDBGT	012EE4-I	E-CMDBIAS	012EE8-I	E-CMDBGTRC	012EEE-I
E-BUILD FLG	012EF0-I	E-CSSLEVEL	012EF2-I	E-CSSLIST	012EF4-I
E-CSSSKIP	012EF6-I	E-IFLVL	012EF8-I	E-JOBIFLVL	012EFA-I
E-JOBFLAG	012EFC-I	E-JOBSKIP	012EFE-I	E-PROMODE	012F00-I
E-LOADER	012F02-I	E-REMOVE	013398-I	E-TCOM	013470-I
E-ERRORC	0134C8-I	P-CMIR.F01	013510-I	E-CMIR.F01	013510-I
E-SVC2.14	013524-I	E-IRBUFFER	01352A-I	E-IREADER	013534-I
E-IRDRINIT	013538-I	P-CMON.F01	013540-I	E-CMON.F01	013540-I
E-CMSP.UDL	013554-I	E-COMMAND	0135F0-I	E-CMDP.TCB	013D28-I

SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS
E-ATTN.P	013DCD-I	E-LOGFLAG	013DE0-I	E-LOGCKPTI	013DE2-I
E-LOGCKCNT	013DE4-I	P-CMSP.F33	013E70-I	E-CMSP.F33	013E70-I
E-CMDP.UDL	013E84-I	E-CMDP.Q	013F04-I	E-CMDEMPY	013FAC-I
E-CMDP.GO	014148-I	E-PICADDR	0143F2-I	E-FLTPFLAG	01440C-I
E-CMDNEXT	014438-I	E-CSKIPA	01451E-I	E-CSSTST	0145A4-I
E-CMDPSYSG	014932-I	E-FORMERR	01497A-I	E-PARMERR	014982-I
E-IOERR	0149C6-I	E-CMDERROR	0149CE-I	E-CMDERREX	0149DC-I
E-ERR.COM	014A5C-I	E-ERR.COM1	014A60-I	E-ERR.ASGN	014A68-I
E-TIMERR	014A94-I	E-SETLU	014AB2-I	E-CHECKCSL	014ADE-I
E-COMMACK1	014B08-I	E-COMMACK	014B08-I	E-SCANNER	014B1C-I
E-TERMCHK	014B2A-I	E-MNMFIN	014B36-I	E-CSSBUF	014B9C-I
E-CSSCLOSE	014BBA-I	E-MSGLOG	014BD8-I	E-PREPRO	014C2C-I
E-BLANKBUF	014DA2-I	E-CMDWGB	014DB6-I	E-CMDWGBX	014DB8-I
E-CMDWRITE	014DC0-I	E-CMDERNV	014E02-I	E-CMDTYMV	014E1C-I
E-XAIDSBK	014FB4-I	E-CMDRDBLK	015064-I	E-SV1ERTB	015118-I
E-IOEMSG	01516C-I	E-CSLTSK	01549C-I	E-CSSTSK	0154A0-I
E-TESTPRT	0154A6-I	E-GENBUF	0154C0-I	E-GENBUF05	0154C5-I
E-GENBUF06	0154C6-I	E-GENBUF07	0154C7-I	E-GENBUF08	0154C8-I
E-GENBUF09	0154C9-I	E-GENBUF10	0154CA-I	E-GENBUF11	0154CB-I
E-GENBUF12	0154CC-I	E-GENBUF13	0154CD-I	E-GENBUF14	0154CE-I
E-GENBUF15	0154CF-I	E-GENBUF16	0154D0-I	E-GENBUF17	0154D1-I
E-GENBUF18	0154D2-I	E-GENBUF19	0154D3-I	E-GENBUF20	0154D4-I
E-GENBUF21	0154D5-I	E-GENBUF22	0154D6-I	E-GENBUF23	0154D7-I
E-GENBUF24	0154D8-I	E-GENBUF25	0154D9-I	E-GENBUF26	0154DA-I
E-GENBUF27	0154DB-I	E-GENBUF28	0154DC-I	E-GENBUF29	0154DD-I
E-GENBUF30	0154DE-I	E-GENBUF31	0154DF-I	E-GENBUF32	0154E0-I
E-GENBUF33	0154E1-I	E-GENBUF34	0154E2-I	E-GENBUF35	0154E3-I
E-GENBUF36	0154E4-I	E-GENBUF37	0154E5-I	E-GENBUF38	0154E6-I
E-GENBUF39	0154E7-I	E-GENBUF40	0154E8-I	E-GENBUF41	0154E9-I
E-GENBUF42	0154EA-I	E-GENBUF43	0154EB-I	E-GENBUF44	0154EC-I
E-GENBUF45	0154ED-I	E-GENBUF46	0154EE-I	E-GENBUF47	0154EF-I
E-GENBUF48	0154F0-I	E-GENBUF49	0154F1-I	E-GENBUF50	0154F2-I
E-GENBUF51	0154F3-I	E-GENBUF52	0154F4-I	E-GENBUF53	0154F5-I
E-GENBUF54	0154F6-I	E-GENBUF55	0154F7-I	E-GENBUF56	0154F8-I
E-GENBUF57	0154F9-I	E-GENBUF58	0154FA-I	E-GENBUF59	0154FB-I
E-GENBUF60	0154FC-I	E-GENBUF61	0154FD-I	E-GENBUF62	0154FE-I
E-GENBUF63	0154FF-I	E-GENBUF64	015500-I	E-GENBUF65	015501-I
E-GENBUF66	015502-I	E-GENBUF67	015503-I	E-GENBUF68	015504-I
E-GENBUF69	015505-I	E-GENBUF70	015506-I	E-GENBUF71	015507-I
E-GENBUF72	015508-I	E-GENBUF73	015509-I	E-GENBUF74	01550A-I
E-GENBUF75	01550B-I	P-ERRC.F01	015550-I	E-ERRC.F01	015550-I
E-MERD.TEF	015564-I	E-MERD.STA	015564-I	E-MERD.CNF	015564-I
E-MER.SCHD	015564-I	E-MER.RSCH	015564-I	E-MEMERLV	015564-I
E-MCONFIG	015564-I	E-FMERRLV	015564-I	E-ERC.GINI	015564-I
E-ERC.BLST	015564-I	E-MER.CNCL	015568-I	E-ERC.RECD	01556E-I
E-ERC.PERD	015578-I	E-ERC.DISP	015582-I	E-ERC.LOG	01558C-I
E-MER.LOG	015596-I	E-ERC.MENT	015598-I	E-ERC.DVRS	015598-I
E-ERC.FMSQ	01559C-I	E-ERC.BTMR	01559C-I	E-ERC.BTMA	01559C-I

SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS
E-ERC.DRBL	01559E-I	E-ERC.IXPR	0155A0-I	E-ERC.DRPR	0155A0-I
E-ERC.TQOV	0155A2-I	E-ERC.SQFL	0155A4-I	E-ERC.SQNL	0155A6-I
E-ERC.SQDR	0155A6-I	E-ERC.MKON	0155A8-I	E-ERC.MKOF	0155AA-I
E-ERC.MNNB	0155AC-I	E-ERC.MFNB	0155AC-I	E-ERC.VOL	0155AE-I
E-ERC.SQDP	0155B0-I	E-ERC.TREN	0155B6-I	E-ERC.TRE2	0155B6-I
E-ERC.PFR	0155B6-I	E-CMDPERFG	0155BC-I	P-EXAC.F01	0155C0-I
E-EXAC.F01	0155C0-I	E-TMCPUOFF	0155D4-I	E-TMCPUON	0155D6-I
E-TCPU.TIM	0155DC-I	E-TCPU.TCB	0155E4-I	E-TCPU.TYP	0155E8-I
E-HOLDTIME	0155F0-I	E-ACUMTIME	0155F0-I	E-ACT.BMSG	0155F6-I
E-ACT.SMSG	0155F8-I	E-SVC2.25	0155FA-I	E-SVC2.24	0155FA-I
E-SV4.RMAW	015600-I	E-SV4.RDAC	015600-I	E-SV4.ENAC	015600-I
E-ACCTZERO	015606-I	E-DSPACCT	015608-I	P-EXIN.F51	015620-I
E-EXIN.F51	015620-I	E-IIH	0156E0-I	E-MEMFLTRS	015788-I
E-MEMFAULT	0157DA-I	E-ISHRS	0157EC-I	E-ISH	015812-I
E-MMH	015B88-I	E-SQS2DISP	016238-I	E-DISP2SQS	016250-I
E-SYSINIT	01629A-I	E-CTR162	016CA0-I	E-EREGS	016D14-I
E-XREGS	016D54-I	P-EXIO.F01	016DA0-I	E-EXIO.F01	016DA0-I
E-SVC1	016DB4-I	E-SVC1.0	016DB6-I	E-SV1ADER1	016FBA-I
E-COMIOH	016FD0-I	E-SVC1WRIT	017014-I	E-SVC1READ	017014-I
E-SVC1WFM	017052-I	E-SVC1REW	017052-I	E-SVC1FSR	017052-I
E-SVC1FFM	017052-I	E-SVC1DDF	017052-I	E-SVC1BSR	017052-I
E-SVC1BFM	017052-I	E-WAITIO	01709E-I	E-SVC1WAIT	0170C8-I
E-SVC1TEST	017164-I	E-SVC1HALT	0171C0-I	E-H1NCON	017216-I
E-H1EXIT	017324-I	E-SVC1EXIT	01733C-I	E-SV1FCER	0173A2-I
E-SVC1NOOP	0173C0-I	E-SVC1INA	017400-I	E-SVC1IA	017406-I
E-SVC1NIA	01740E-I	E-SVC1NINA	01741C-I	E-DCB25500	017424-I
E-NULLIOH	0174BC-I	E-BAREIOH	017500-I	E-MDISKINI	017544-I
E-BARETST	01759E-I	E-BAREWR	0175B0-I	E-BARERD	0175B0-I
E-IOSETCC	0177D0-I	E-DIRDONE	0177E4-I	E-SQS.EX	0177F6-I
E-EVRTE	0177F6-I	E-SQS	0177FC-I	E-SQS.TIME	01785C-I
E-SQS.TSL	017870-I	E-SQS.SLV	01787E-I	E-SQS.MLV	017892-I
E-IODONE2	0178CC-I	E-IODONE	0178CC-I	E-IODCOM	0178E0-I
E-IODCOM2	017914-I	E-GETIOB	017920-I	E-RELIQB	017952-I
E-COMQ	017960-I	E-COMFIFO	017978-I	E-DISKQ	0179F8-I
E-SEEKPOS	0179FC-I	E-SEEKCHK	017A06-I	E-LEAFQ	017A0A-I
E-LEAFCON	017A3A-I	E-EVQCON	017B26-I	E-EVCON	017B2C-I
E-EVDIS	017C10-I	E-IODGST	017CFC-I	E-IODGST2	017D3E-I
E-IODTWT	017D46-I	E-IODTWT2	017D82-I	E-NSEVREL	017DA4-I
E-EVREL	017DA4-I	E-COMDIS	017DEC-I	E-EVMOD	017E9C-I
E-TOITAMIO	017EAE-I	P-EXLD.F50	017EC0-I	E-EXLD.F50	017EC0-I
E-LOAD.SRF	017ED4-I	E-LOADING	017F24-I	E-LOADTASK	018000-I
E-TCBLOOK	018F64-I	E-TCBLOOK2	018F66-I	E-SEG.ADD	018F9A-I
E-SEG.RMV	018FF8-I	E-PUR.SCAN	0190E4-I	E-SEG.SCAN	0190EA-I
E-SEG.DIS	019404-I	E-RELPST	0195A8-I	E-LOADSEG	01960C-I
E-PSWSAV	019928-I	P-EXMY.F52	019940-I	E-EXMY.F52	019940-I
E-SVC2.2	019954-I	E-SVC2.3	019A04-I	E-SVC2.20	019A40-I
E-SVC2.21	019A4C-I	E-GETTQE	019A80-I	E-RELTQE	019A9C-I
E-GETFCB	019ACC-I	E-RELEFCB	019B54-I	E-GETZERO	019BC4-I

SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS
E-GETMEM	019BDC-I	E-RELMEM	019C3C-I	E-GETTCB	019CE6-I
E-RELTCB	019CFC-I	E-RELTCB1	019D00-I	E-GETSDE	019D0A-I
E-RELSDE	019D1C-I	E-GETSTSYN	019D24-I	E-GETSYP	019D2C-I
E-RELSYP	019E52-I	E-ROERMSG	019F18-I	E-ROERTYPE	019F28-I
E-ROERNAME	019F38-I	E-ROERSTYP	019F50-I	E-ROERMSGE	019F53-I
E-SEGTYPE	019F54-I	P-EXSP.F51	019F80-I	E-EXSP.F51	019F80-I
E-SVC2	019F94-I	E-TERM	01A976-I	E-TERM1	01A97C-I
E-CANEOJ	01ACF2-I	E-EXECSRCC	01AEOC-I	E-UNPACK	01AE28-I
E-JOURNAL	01AE90-I	E-TIMEOUT	01AE94-I	E-ADCHKF1	01AEE6-I
E-ADCHKF	01AEF0-I	E-ADCHK	01AEF8-I	E-ADCHK1	01AF04-I
E-ADCHK2F1	01AFBE-I	E-ADCHK2F	01AFC8-I	E-ADCHK2	01AFD0-I
E-ADCHK2F2	01AFDC-I	E-ADCHKNS	01AFEC-I	E-ADCHKNS1	01AFFC-I
E-ADCHK2ET	01BOB6-I	E-DE.ADCHK	01B0DC-I	P-EXSV.F52	01B170-I
E-EXSV.F52	01B170-I	E-SVC3	01B184-I	E-SV3.TERM	01B194-I
E-COMEOT	01B284-I	E-DISPPSW	01B688-I	E-SVC9	01B6A2-I
E-SVC14	01B74A-I	F-SVC4	01B76E-I	E-SV4.NEXT	01B8B4-I
E-SV4.ERR3	01B8CE-I	E-SVC5	01B93A-I	E-SV6ERCD	01BACC-I
E-SV6ERTB	01BAF0-I	E-SVC6	01BBF0-I	E-SUBCKRPT	01C3B8-I
E-SUBRPORT	01C3BA-I	E-SUBRPTNS	01C416-I	E-MTMRPTNS	01C420-I
E-SETUTOP	01C798-I	E-SETDELAY	01C7F6-I	E-SVC10	01CB14-I
P-EXTI.F01	01CF40-I	E-EXTI.F01	01CF40-I	E-SVC2.8	01CF54-I
E-SVC2.9	01D04E-I	E-SVC2.10	01D0EA-I	E-SVC2.11	01D0EE-I
E-SVC2.23	01D104-I	E-GETTUREG	01D4E2-I	E-TICAN	01D6C8-I
E-TICAN1	01D6CC-I	E-TIFXTCHN	01D7BC-I	E-PICESR	01D97E-I
E-TIMESR	01DA82-I	E-CPU.TIME	01DD1C-I	E-TM.FREQ	01DD24-I
E-TM30DAYS	01DD25-I	E-TM.FEB	01DD27-I	E-ITAMFREQ	01DD3A-I
E-ITM.FREQ	01DD3C-I	E-TOCHON	01DD3E-I	E-TOCHOFF	01DD62-I
P-EXTM.F52	01DDA0-I	E-EXTM.F52	01DDA0-I	E-SV9.ATQ1	01DDB4-I
E-SV9.ATQ	01DDBA-I	E-SV9.ASQ1	01DDBE-I	E-SV9.ASQ	01DDC4-I
E-SV9.TSWN	01DEE8-I	E-SV9.STSW	01DEEE-I	E-TMDISP	01DFA0-I
E-ROLLPRIO	01DFB2-I	E-TMRDISP	01DFB4-I	E-TMRD.MAC	01E0B2-I
E-TMNSOUT	01E64C-I	E-TMSTART	01E676-I	E-TMSTOPW	01E6D8-I
E-TMSTOP	01E6DE-I	E-TMRSAIN	01E724-I	E-TMRSIN1	01E73C-I
E-TMRSIN	01E73C-I	E-TMRSARS	01E826-I	E-TMRSRSA	01E846-I
E-TMRSOUT	01E896-I	E-TMRSOTNS	01E8A4-I	E-TMRSAOUT	01E8E2-I
E-TMREM	01E984-I	E-TMCHN	01E9FC-I	E-TMUCHN	01EA60-I
P-FLTP.F04	01EACO-I	E-FLTP.F04	01EACO-I	E-FLTP	01EAD4-I
E-FLTPDBG	01FFD8-I	P-FMCO.F33	01FFE0-I	E-FMCO.F33	01FFE0-I
E-CNTGIOH	01FFF4-I	P-FMIN.F33	0207C0-I	E-FMIN.F33	0207C0-I
E-INDXIOH	0207D4-I	E-INDEXC	020826-I	E-COMNO1	020834-I
E-ISSUEIO	021070-I	E-INX.ZBUF	0210EC-I	E-INX.READ	02111A-I
E-INX.FORL	02117E-I	E-INX.CINX	0212D4-I	E-RESET.IN	0212F6-I
P-FMNB.F33	021550-I	E-FMNB.F33	021550-I	E-NBUFFIOH	021564-I
E-NBUFF00	0215A8-I	E-NBF.CINX	021A72-I	E-NBF.POSN	021AF6-I
E-NBF.FORL	021BB4-I	E-RESET.NB	021CE6-I	P-FMS7.F34	021E80-I
E-FMS7.F34	021E80-I	E-SVC7	021E94-I	E-SV7.CMD	02203C-I
E-OPN.BDSK	0222E8-I	E-OPEN.DEV	022340-I	E-OPD.NRJE	022408-I
E-RESET.RW	023DA4-I	E-RESET	023DA4-I	E-WAITRS	0240EC-I



SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS
E-TESTRS	02413C-I	E-ERR.NB	02454E-I	E-ERR.02	024552-I
E-ERR.OB	02457A-I	P-FMUT.F33	024970-I	E-FMUT.F33	024970-I
E-APCHECK	024984-I	F-APCHECK1	024A64-I	E-APCHECK2	024A70-I
E-DATE.DIR	024B10-I	E-GETSECTR	024B3C-I	E-PUTB	024EE8-I
E-RELEB	024F66-I	E-FDCHECK	025054-I	E-DEVCHECK	025086-I
E-ACCHECK	025114-I	E-LUCHECK	025190-I	E-DIRLOOK	0251AA-I
E-MAKEXFNM	025480-I	E-GETD	0254D4-I	E-PUTD	025548-I
E-DMTLOOK	025564-I	E-VMTLOOK	025594-I	E-ALLOD	02559E-I
E-SET.LRCL	02583C-I	E-MOVE	02586C-I	E-MOVE1	025A78-I
E-MOVENULL	025A8E-I	P-INTC.F01	025ADO-I	E-INTC.F01	025ADO-I
E-SV4ITRAP	025AE4-I	E-SV4ITERM	025AE4-I	E-SV4IROLL	025AE4-I
E-SV4IREMV	025AE4-I	E-SV4IPUT	025AE4-I	E-SV4IPROC	025AE4-I
E-SV4IGET	025AE4-I	E-SV4ICRTE	025AE4-I	E-SV4ICRSP	025AE4-I
E-SV4ICONT	025AE4-I	E-STRTINTC	025AF0-I	E-INTERCPT	025AF0-I
E-ENDINTC	025AF0-I	E-DORSINTC	025AF0-I	E-XTCBLOOK	025AF6-I
E-XDMTLOOK	025AF6-I	E-IPAUSCHK	025AF8-I	P-MCHK.F02	025B00-I
E-MCHK.F02	025B00-I	E-MEMONOFF	025B14-I	E-MEMCHK2	025E5A-I
E-MEMCHKER	025F30-I	E-MKOFMEM	026412-I	E-INITMTST	026642-I
P-DUMP.F01	026910-I	E-DUMP.F01	026910-I	E-PANIC	026924-I
E-MSG	026FAE-I	E-GETC	026FDE-I	E-TOPCSRCH	0270A6-I
E-DMP.SOPT	027208-I	E-CON.GET	02721A-I	E-CON.PUT	02721B-I
E-DUMP.CON	02721C-I	E-DUMP.CNW	02721E-I	P-ITFM.M00	027510-I
E-ITFM.M00	027510-I	E-SVC15	027522-I	E-CANITAM	027528-I
E-IT.OPEN	02752E-I	E-IT.DELET	027534-I	E-IT.ALLOC	027534-I
E-IT.ORJE	027540-I	E-IT.FETCH	027540-I	E-IT.CLOSE	027540-I
E-IT.CHKPT	027540-I	E-IT.CAP	027540-I	E-IT.RSLU	02754C-I
E-GETCPH	02754E-I	E-ITEMTLF	027560-I	E-ITAMTIMC	027560-I
E-ITAMCNT	027560-I	E-EMT.FREQ	027560-I	P-UBOT.F01	027570-I
E-UBOT.F01	027570-I	E-UBOT.0	027584-I	E-OS.PATCH	027584-I
E-UBOT	0276A4-I	E-OS.END	0276A4-I		

-- IMAGE LINKED AT 13:52:03 ON MARCH 27, 1983 --

SYMBOL	-- NODE	-- ADDRESS	SYMBOL	-- NODE	-- ADDRESS
E-SBUILD	.ROOT	012808-I	E-SCLEAR	.ROOT	012902-I
E-SCOPY	.ROOT	012B2E-I	E-SELSE	.ROOT	012A8A-I
E-SENDC	.ROOT	012ABA-I	E-SEXIT	.ROOT	0128B4-I
E-SIFE	.ROOT	0129D2-I	E-SIFG	.ROOT	0129BA-I
E-SIFL	.ROOT	0129C6-I	E-SIFNE	.ROOT	0129F6-I
E-SIFNG	.ROOT	0129DE-I	E-SIFNL	.ROOT	0129EA-I
E-SIFNULL	.ROOT	012A1A-I	E-SIFNULL	.ROOT	012A02-I
E-SIFNX	.ROOT	012A3A-I	E-SIFX	.ROOT	012A30-I
E-SINITFLP	.ROOT	009740-I	E-SINITMHD	.ROOT	008858-I
E-SINITMMD	.ROOT	008DB8-I	E-SJOB	.ROOT	01284C-I
E-SNOCOPY	.ROOT	012B3A-I	E-SSKIP	.ROOT	01288A-I
E-STERMJOB	.ROOT	012942-I	E-STRANS	.ROOT	01297C-I
E-SWRITE	.ROOT	012ADE-I	E-.MTM	.ROOT	01256C-I
E-.SPL	.ROOT	012558-I	E-ACCHECK	.ROOT	025114-I
E-ACCTZERO	.ROOT	015606-I	E-ACT.BMSG	.ROOT	0155F6-I
E-ACT.SMSG	.ROOT	0155F8-I	E-ACUMTIME	.ROOT	0155F0-I
E-ADCHK	.ROOT	01AEF8-I	E-ADCHK1	.ROOT	01AF04-I
E-ADCHK2	.ROOT	01AFD0-I	E-ADCHK2ET	.ROOT	01B0B6-I
E-ADCHK2F	.ROOT	01AFC8-I	E-ADCHK2F1	.ROOT	01AFBE-I
E-ADCHK2F2	.ROOT	01AFDC-I	E-ADCHKF	.ROOT	01AEF0-I
E-ADCHKF1	.ROOT	01AEE6-I	E-ADCHKNS	.ROOT	01AFEC-I
E-ADCHKNS1	.ROOT	01AFFC-I	E-ALLOCATE	.ROOT	0101E0-I
E-ALLOD	.ROOT	02559E-I	E-APCHECK	.ROOT	024984-I
E-APCHECK1	.ROOT	024A64-I	E-APCHECK2	.ROOT	024A70-I
E-ASGNERR	.ROOT	0120F8-I	E-ASSIGN	.ROOT	011F22-I
E-ATTN.P	.ROOT	013DCD-I	E-BACREC	.ROOT	00EDA4-I
E-BAREIOH	.ROOT	017500-I	E-BARERD	.ROOT	0175B0-I
E-BARETST	.ROOT	01759E-I	E-BAREWR	.ROOT	0175B0-I
E-BFILE	.ROOT	00ED9E-I	E-BFM	.ROOT	009E7C-I
E-BIAS	.ROOT	011010-I	E-BIO.OCIV	.ROOT	0022F2-P
E-BIO.PPTO	.ROOT	0022F0-P	E-BIOC.ID	.ROOT	007E8C-I
E-BIOC.IOH	.ROOT	0084FC-I	E-BIT4900	.ROOT	007618-I
E-BIT5000	.ROOT	0076F4-I	E-BIT5100	.ROOT	00769C-I
E-BIT5200	.ROOT	007778-I	E-BIT5300	.ROOT	0077D0-I
E-BIT5400	.ROOT	007828-I	E-BIT5500	.ROOT	0074E4-I
E-BIT5501	.ROOT	00753C-I	E-BLANKBUF	.ROOT	014DA2-I
E-BOTCHECK	.ROOT	00A528-I	E-BSR	.ROOT	009D6A-I
E-BSRPRIM	.ROOT	009DA2-I	E-BUILD	.ROOT	0127E8-I
E-BUILDDSP	.ROOT	012812-I	E-BUILDFLG	.ROOT	012EF0-I
E-C000	.ROOT	007880-I	E-C100	.ROOT	0078AC-I
E-C200	.ROOT	0078D8-I	E-C300	.ROOT	007904-I
E-C400	.ROOT	007930-I	E-CANCEL	.ROOT	010FD2-I
E-CANEOJ	.ROOT	01ACF2-I	E-CANITAM	.ROOT	027528-I
E-CARDHARD	.ROOT	00B592-I	E-CB600	.ROOT	00795C-I
E-CBUFLV	.ROOT	0073DC-I	E-CCB11300	.ROOT	000A78-P
E-CCB1600	.ROOT	000A00-P	E-CCB3900	.ROOT	000A1C-P
E-CCB4900	.ROOT	000B90-P	E-CCB5100	.ROOT	000BAC-P
E-CCB5200	.ROOT	000BC8-P	E-CCB5500	.ROOT	000ACC-P

-- IMAGE LINKED AT 13:52:03 ON MARCH 27, 1983 --

SYMBOL	-- NODE	-- ADDRESS	SYMBOL	-- NODE	-- ADDRESS
E-CCB5501	.ROOT	000AE8-P	E-CCB6400	.ROOT	000B04-P
E-CCB6500	.ROOT	000B20-P	E-CCB6600	.ROOT	000A94-P
E-CCB6601	.ROOT	000AB0-P	E-CCB6800	.ROOT	000B3C-P
E-CCB6900	.ROOT	000B58-P	E-CCB7000	.ROOT	000B74-P
E-CCB9600	.ROOT	000A5C-P	E-CCBDSC0	.ROOT	000B90-P
E-CCBDSC1	.ROOT	000BAC-P	E-CCBDSC3	.ROOT	000BC8-P
E-CCBFLP1	.ROOT	000ACC-P	E-CCBFLP2	.ROOT	000AE8-P
E-CCBMAG1	.ROOT	000B04-P	E-CCX3900	.ROOT	000A38-P
E-CDESV3	.ROOT	00CD26-I	E-CDEXIN	.ROOT	00CD92-I
E-CDEXMY	.ROOT	00CD54-I	E-CDEXTM	.ROOT	00CD12-I
E-CDFUTB	.ROOT	00CD44-I	E-CCSV27	.ROOT	00CCDE-I
P-CDVR.F01	.ROOT	00CA70-I	E-CDVR.F01	.ROOT	00CA70-I
E-CFB00	.ROOT	007988-I	E-CHCKDDPS	.ROOT	00A6C2-I
E-CHECK.ID	.ROOT	00E7FE-I	E-CHECKCSL	.ROOT	014ADE-I
E-CHECKDU	.ROOT	00A384-I	E-CHECKID	.ROOT	00E802-I
E-CIOINCPT	.ROOT	00CB4E-I	E-CMCLOSE	.ROOT	011D3E-I
E-CMDASGN1	.ROOT	012252-I	P-CMDB.F33	.ROOT	00D000-I
E-CMDB.F33	.ROOT	00D000-I	E-CMDBGT	.ROOT	012EE4-I
E-CMDBGTRC	.ROOT	012EEE-I	E-CMDBIAS	.ROOT	012EE8-I
E-CMDBUFFS	.ROOT	003F80-I	E-CMDCASS	.ROOT	00B422-I
E-CMDCLOSE	.ROOT	012270-I	E-CMDELETE	.ROOT	0100BA-I
E-CMDEMPTY	.ROOT	013FAC-I	E-CMDERMV	.ROOT	014E02-I
E-CMDERREX	.ROOT	0149DC-I	E-CMDERROR	.ROOT	0149CE-I
E-CMDFLP	.ROOT	0097FA-I	E-CMDM62E	.ROOT	00B004-I
E-CMDMAGS	.ROOT	009BE4-I	E-CMDNEXT	.ROOT	014438-I
E-CMDP.GO	.ROOT	014148-I	E-CMDP.Q	.ROOT	013F04-I
E-CMDP.TCB	.ROOT	013D28-I	E-CMDP.UDL	.ROOT	013E84-I
E-CMDPERFG	.ROOT	0155BC-I	E-CMDPSYSG	.ROOT	014932-I
E-CMDPTCB	.ROOT	003C60-I	E-CMDRDBLK	.ROOT	015064-I
E-CMDSCAN	.ROOT	00A488-I	E-CMDTYMV	.ROOT	014E1C-I
E-CMDWGB	.ROOT	014DB6-I	E-CMDWGBX	.ROOT	014DB8-I
E-CMDWRITE	.ROOT	014DC0-I	P-CMEX.F33	.ROOT	010E90-I
E-CMEX.F33	.ROOT	010E90-I	E-CMIR.F01	.ROOT	013510-I
P-CMIR.F01	.ROOT	013510-I	E-CMON.F01	.ROOT	013540-I
P-CMON.F01	.ROOT	013540-I	E-CMRENAME	.ROOT	011E06-I
P-CMSP.F33	.ROOT	013E70-I	E-CMSP.F33	.ROOT	013E70-I
E-CMSP.UDL	.ROOT	013554-I	E-CNTGIOH	.ROOT	01FFF4-I
E-CNVNUM	.ROOT	00C538-I	E-COMDIS	.ROOT	017DEC-I
E-COMEOT	.ROOT	01B284-I	E-COMFIFO	.ROOT	017978-I
E-COMIOH	.ROOT	016FD0-I	E-COMMACK	.ROOT	014B08-I
E-COMMACK1	.ROOT	014B08-I	E-COMMAND	.ROOT	0135F0-I
E-COMN01	.ROOT	020834-I	E-COMQ	.ROOT	017960-I
E-CON.GET	.ROOT	02721A-I	E-CON.PUT	.ROOT	02721B-I
E-CONDVR	.ROOT	00CDE0-I	E-CONTINUE	.ROOT	010EA4-I
E-CPU.TIME	.ROOT	01DD1C-I	E-CRASH	.ROOT	00A630-I
E-CSKIPA	.ROOT	01451E-I	E-CSLTSK	.ROOT	01549C-I
E-CSSBUF	.ROOT	014B9C-I	E-CSSCLOSE	.ROOT	014BBA-I
E-CSSLEVEL	.ROOT	012EF2-I	E-CSSLIST	.ROOT	012EF4-I

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SYMBOL	-- NODE	-- ADDRESS	SYMBOL	-- NODE	-- ADDRESS
E-CSSSKIP	.ROOT	012EF6-I	E-CSSTSK	.ROOT	0154A0-I
E-CSSTST	.ROOT	0145A4-I	E-CTR162	.ROOT	016CA0-I
E-DATE.DIR	.ROOT	024B10-I	E-DEBUGNOPR	.ROOT	00ED72-I
E-DCB.CAS1	.ROOT	0049A4-I	E-DCB.CAS2	.ROOT	004A40-I
E-DCB.CON	.ROOT	004530-I	E-DCB.CR	.ROOT	0047E4-I
E-DCB.CRT	.ROOT	0045CC-I	E-DCB.DSC0	.ROOT	005AD4-I
E-DCB.DSC1	.ROOT	005E70-I	E-DCB.DSC2	.ROOT	00620C-I
E-DCB.DSC3	.ROOT	0065A8-I	E-DCB.DSC4	.ROOT	006944-I
E-DCB.DSC5	.ROOT	006DBC-I	E-DCB.FLP1	.ROOT	004ADC-I
E-DCB.FLP2	.ROOT	004E78-I	E-DCB.MAG1	.ROOT	005214-I
E-DCB.MAG2	.ROOT	0053D4-I	E-DCB.MAG3	.ROOT	005594-I
E-DCB.MAG4	.ROOT	005754-I	E-DCB.MAG5	.ROOT	005914-I
E-DCB.PR	.ROOT	004880-I	E-DCB11300	.ROOT	004880-I
E-DCB1600	.ROOT	004530-I	E-DCB25500	.ROOT	017424-I
E-DCB3900	.ROOT	0045CC-I	E-DCB4900	.ROOT	005AD4-I
E-DCB5000	.ROOT	00620C-I	E-DCB5100	.ROOT	005E70-I
E-DCB5200	.ROOT	0065A8-I	E-DCB5300	.ROOT	006944-I
E-DCB5400	.ROOT	006DBC-I	E-DCB5500	.ROOT	004ADC-I
E-DCB5501	.ROOT	004E78-I	E-DCB6400	.ROOT	005214-I
E-DCB6500	.ROOT	0053D4-I	E-DCB6600	.ROOT	0049A4-I
E-DCB6601	.ROOT	004A40-I	E-DCB6800	.ROOT	005594-I
E-DCB6900	.ROOT	005754-I	E-DCB7000	.ROOT	005914-I
E-DCB9600	.ROOT	0047E4-I	E-DCBCMD	.ROOT	00CF24-I
P-DCBS	.ROOT	000A00-P	P-DCBS	.ROOT	004530-I
E-DE.ADCHK	.ROOT	01B0DC-I	E-DEVCHECK	.ROOT	025086-I
E-DIR4900	.ROOT	007644-I	E-DIR5000	.ROOT	007720-I
E-DIR5100	.ROOT	0076C8-I	E-DIR5200	.ROOT	0077A4-I
E-DIR5300	.ROOT	0077FC-I	E-DIR5400	.ROOT	007854-I
E-DIR5500	.ROOT	007510-I	E-DIR5501	.ROOT	007568-I
E-DIRDONE	.ROOT	0177E4-I	E-DIREXIT	.ROOT	00C206-I
E-DIREXT	.ROOT	010CC4-I	E-DIRFN	.ROOT	010CBC-I
E-DIRLOOK	.ROOT	0251AA-I	E-DIRREGS	.ROOT	00A430-I
E-DISKQ	.ROOT	0179F8-I	E-DISP2SQS	.ROOT	016250-I
E-DISPFD	.ROOT	00E4D0-I	E-DISPIND1	.ROOT	010CB0-I
E-DISPIND2	.ROOT	010CB2-I	E-DISPLAY	.ROOT	00DCDA-I
E-DISPPSW	.ROOT	01B688-I	E-DMLV	.ROOT	0072D4-I
E-DMP.SOPT	.ROOT	027208-I	E-DMT	.ROOT	004480-I
E-DMT.CAS1	.ROOT	0044A8-I	E-DMT.CAS2	.ROOT	0044B0-I
E-DMT.CON	.ROOT	004488-I	E-DMT.CR	.ROOT	004498-I
E-DMT.CRT	.ROOT	004490-I	E-DMT.DSC0	.ROOT	0044F0-I
E-DMT.DSC1	.ROOT	0044F8-I	E-DMT.DSC2	.ROOT	004500-I
E-DMT.DSC3	.ROOT	004508-I	E-DMT.DSC4	.ROOT	004510-I
E-DMT.DSC5	.ROOT	004518-I	E-DMT.FLP1	.ROOT	0044B8-I
E-DMT.FLP2	.ROOT	0044C0-I	E-DMT.MAG1	.ROOT	0044C8-I
E-DMT.MAG2	.ROOT	0044D0-I	E-DMT.MAG3	.ROOT	0044D8-I
E-DMT.MAG4	.ROOT	0044E0-I	E-DMT.MAG5	.ROOT	0044E8-I
E-DMT.PR	.ROOT	0044A0-I	P-DMTINIT	.ROOT	004480-I
E-DMTLOOK	.ROOT	025564-I	E-DMTNUL	.ROOT	004480-I

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SYMBOL	-- NODE	-- ADDRESS	SYMBOL	-- NODE	-- ADDRESS
E-DORSINTC	.ROOT	025AF0-I	E-DOWNLD	.ROOT	00C6A0-I
E-DSPACCT	.ROOT	015608-I	E-DSPFHD	.ROOT	00D014-I
E-DUMP.CNW	.ROOT	02721E-I	E-DUMP.CON	.ROOT	02721C-I
P-DUMP.F01	.ROOT	026910-I	E-DUMP.F01	.ROOT	026910-I
E-EMT.FREQ	.ROOT	027560-I	E-ENDINTC	.ROOT	025AF0-I
E-ENDSCAN	.ROOT	00C154-I	E-ENDSCAN1	.ROOT	00C18E-I
E-EOFTEST	.ROOT	00A4A8-I	E-EOTTESTF	.ROOT	00A4FE-I
E-ERASE	.ROOT	00A1E2-I	E-ERASE1	.ROOT	00A2D0-I
E-ERC.BLST	.ROOT	015564-I	E-ERC.BTMA	.ROOT	01559C-I
E-ERC.BTMR	.ROOT	01559C-I	E-ERC.DISP	.ROOT	015582-I
E-ERC.DRBL	.ROOT	01559E-I	E-ERC.DRPR	.ROOT	0155A0-I
E-ERC.DVRS	.ROOT	015598-I	E-ERC.FMSQ	.ROOT	01559C-I
E-ERC.GINI	.ROOT	015564-I	E-ERC.IXPR	.ROOT	0155A0-I
E-ERC.LOG	.ROOT	01558C-I	E-ERC.MENT	.ROOT	015598-I
E-ERC.MFNB	.ROOT	0155AC-I	E-ERC.MKOF	.ROOT	0155AA-I
E-ERC.MKON	.ROOT	0155A8-I	E-ERC.MNNB	.ROOT	0155AC-I
E-ERC.PERD	.ROOT	015578-I	E-ERC.PFR	.ROOT	0155B6-I
E-ERC.RECD	.ROOT	01556E-I	E-ERC.SQDP	.ROOT	0155B0-I
E-ERC.SQDR	.ROOT	0155A6-I	E-ERC.SQFL	.ROOT	0155A4-I
E-ERC.SQNL	.ROOT	0155A6-I	E-ERC.TQOV	.ROOT	0155A2-I
E-ERC.TRE2	.ROOT	0155B6-I	E-ERC.TREN	.ROOT	0155B6-I
E-ERC.VOL	.ROOT	0155AE-I	E-EREGS	.ROOT	016D14-I
E-ERR.02	.ROOT	024552-I	E-ERR.OB	.ROOT	02457A-I
E-ERR.ASGN	.ROOT	014A68-I	E-ERR.COM	.ROOT	014A5C-I
E-ERR.COM1	.ROOT	014A60-I	E-ERR.NB	.ROOT	02454E-I
P-ERRC.F01	.ROOT	015550-I	E-ERRC.F01	.ROOT	015550-I
E-ERRDU	.ROOT	00A742-I	E-ERROR	.ROOT	00A7B0-I
E-ERRORC	.ROOT	0134C8-I	E-ERRRECOV	.ROOT	00A74C-I
E-ERRUNREC	.ROOT	00A756-I	E-ESR1MMD	.ROOT	0092A0-I
E-ESR2MMD	.ROOT	0092E4-I	E-ESR3MMD	.ROOT	009308-I
E-ESR4MMD	.ROOT	009610-I	E-ESR5MMD	.ROOT	009674-I
E-ESRERS	.ROOT	00A312-I	E-ESRTOUT	.ROOT	00A374-I
E-EVCON	.ROOT	017B2C-I	E-EVDIS	.ROOT	017C10-I
E-EVMOD	.ROOT	017E9C-I	P-EVNGEN	.ROOT	000BF0-P
P-EVNGEN	.ROOT	007260-I	E-EVQCON	.ROOT	017B26-I
E-EVREL	.ROOT	017DA4-I	E-EVRTE	.ROOT	0177F6-I
E-EVT	.ROOT	0072A8-I	E-EXAC.F01	.ROOT	0155C0-I
P-EXAC.F01	.ROOT	0155C0-I	E-EXECMSG	.ROOT	00CBAC-I
E-EXECSRSCC	.ROOT	01AE0C-I	P-EXIN.F51	.ROOT	003450-P
P-EXIN.F51	.ROOT	015620-I	E-EXIN.F51	.ROOT	015620-I
E-EXIO.F01	.ROOT	016DA0-I	P-EXIO.F01	.ROOT	016DA0-I
E-EXLD.F50	.ROOT	017EC0-I	P-EXLD.F50	.ROOT	017EC0-I
E-EXMY.F52	.ROOT	019940-I	P-EXMY.F52	.ROOT	019940-I
P-EXSP.F51	.ROOT	019F80-I	E-EXSP.F51	.ROOT	019F80-I
P-EXSV.F52	.ROOT	01B170-I	E-EXSV.F52	.ROOT	01B170-I
P-EXTI.F01	.ROOT	003710-P	P-EXTI.F01	.ROOT	01CF40-I
E-EXTI.F01	.ROOT	01CF40-I	E-EXTM.F52	.ROOT	01DDA0-I
P-EXTM.F52	.ROOT	01DDA0-I	E-FDCHECK	.ROOT	025054-I

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SYMBOL	-- NODE	-- ADDRESS	SYMBOL	-- NODE	-- ADDRESS
E-FDERROR	.ROOT	012130-I	E-FFILE	.ROOT	00ED92-I
E-FFM	.ROOT	009F1C-I	E-FIRECMD	.ROOT	00A464-I
E-FIREIO	.ROOT	00A40A-I	E-FLTP	.ROOT	01EAD4-I
E-FLTP.F04	.ROOT	01EAC0-I	P-FLTP.F04	.ROOT	01EAC0-I
E-FLTPDEBUG	.ROOT	01FFD8-I	E-FLTPFLAG	.ROOT	01440C-I
P-FMCO.F33	.ROOT	01FFE0-I	E-FMCO.F33	.ROOT	01FFE0-I
E-FMERRLV	.ROOT	015564-I	E-FMIN.F33	.ROOT	0207C0-I
P-FMIN.F33	.ROOT	0207C0-I	P-FMNB.F33	.ROOT	021550-I
E-FMNB.F33	.ROOT	021550-I	P-FMS7.F34	.ROOT	021E80-I
E-FMS7.F34	.ROOT	021E80-I	E-FMUT.F33	.ROOT	024970-I
P-FMUT.F33	.ROOT	024970-I	E-FORMERR	.ROOT	01497A-I
E-FORREC	.ROOT	00ED98-I	E-FSR	.ROOT	009CA2-I
E-FSRPRIM	.ROOT	009CD6-I	E-GENBUF05	.ROOT	0154C5-I
E-GENBUF06	.ROOT	0154C6-I	E-GENBUF07	.ROOT	0154C7-I
E-GENBUF08	.ROOT	0154C8-I	E-GENBUF09	.ROOT	0154C9-I
E-GENBUF10	.ROOT	0154CA-I	E-GENBUF11	.ROOT	0154CB-I
E-GENBUF12	.ROOT	0154CC-I	E-GENBUF13	.ROOT	0154CD-I
E-GENBUF14	.ROOT	0154CE-I	E-GENBUF15	.ROOT	0154CF-I
E-GENBUF16	.ROOT	0154D0-I	E-GENBUF17	.ROOT	0154D1-I
E-GENBUF18	.ROOT	0154D2-I	E-GENBUF19	.ROOT	0154D3-I
E-GENBUF20	.ROOT	0154D4-I	E-GENBUF21	.ROOT	0154D5-I
E-GENBUF22	.ROOT	0154D6-I	E-GENBUF23	.ROOT	0154D7-I
E-GENBUF24	.ROOT	0154D8-I	E-GENBUF25	.ROOT	0154D9-I
E-GENBUF26	.ROOT	0154DA-I	E-GENBUF27	.ROOT	0154DB-I
E-GENBUF28	.ROOT	0154DC-I	E-GENBUF29	.ROOT	0154DD-I
E-GENBUF30	.ROOT	0154DE-I	E-GENBUF31	.ROOT	0154DF-I
E-GENBUF32	.ROOT	0154E0-I	E-GENBUF33	.ROOT	0154E1-I
E-GENBUF34	.ROOT	0154E2-I	E-GENBUF35	.ROOT	0154E3-I
E-GENBUF36	.ROOT	0154E4-I	E-GENBUF37	.ROOT	0154E5-I
E-GENBUF38	.ROOT	0154E6-I	E-GENBUF39	.ROOT	0154E7-I
E-GENBUF40	.ROOT	0154E8-I	E-GENBUF41	.ROOT	0154E9-I
E-GENBUF42	.ROOT	0154EA-I	E-GENBUF43	.ROOT	0154EB-I
E-GENBUF44	.ROOT	0154EC-I	E-GENBUF45	.ROOT	0154ED-I
E-GENBUF46	.ROOT	0154EE-I	E-GENBUF47	.ROOT	0154EF-I
E-GENBUF48	.ROOT	0154F0-I	E-GENBUF49	.ROOT	0154F1-I
E-GENBUF50	.ROOT	0154F2-I	E-GENBUF51	.ROOT	0154F3-I
E-GENBUF52	.ROOT	0154F4-I	E-GENBUF53	.ROOT	0154F5-I
E-GENBUF54	.ROOT	0154F6-I	E-GENBUF55	.ROOT	0154F7-I
E-GENBUF56	.ROOT	0154F8-I	E-GENBUF57	.ROOT	0154F9-I
E-GENBUF58	.ROOT	0154FA-I	E-GENBUF59	.ROOT	0154FB-I
E-GENBUF50	.ROOT	0154FC-I	E-GENBUF61	.ROOT	0154FD-I
E-GENBUF62	.ROOT	0154FE-I	E-GENBUF63	.ROOT	0154FF-I
E-GENBUF64	.ROOT	015500-I	E-GENBUF65	.ROOT	015501-I
E-GENBUF66	.ROOT	015502-I	E-GENBUF67	.ROOT	015503-I
E-GENBUF68	.ROOT	015504-I	E-GENBUF69	.ROOT	015505-I
E-GENBUF70	.ROOT	015506-I	E-GENBUF71	.ROOT	015507-I
E-GENBUF72	.ROOT	015508-I	E-GENBUF73	.ROOT	015509-I
E-GENBUF74	.ROOT	01550A-I	E-GENBUF75	.ROOT	01550B-I

-- IMAGE LINKED AT 13:52:03 ON MARCH 27, 1983 --

SYMBOL	-- NODE	-- ADDRESS	SYMBOL	-- NODE	-- ADDRESS
E-GENBUFF	.ROOT	0154C0-I	E-GENXLATE	.ROOT	00C864-I
E-GETBUFCH	.ROOT	00C37C-I	E-GETBUFF	.ROOT	00C214-I
E-GETC	.ROOT	026FDE-I	E-GETCPH	.ROOT	02754E-I
E-GETD	.ROOT	0254D4-I	E-GETFCB	.ROOT	019ACC-I
E-GETFRAC	.ROOT	012B3E-I	E-GETIOB	.ROOT	017920-I
E-GETMEM	.ROOT	019BDC-I	E-GETSDE	.ROOT	019D0A-I
E-GETSECTR	.ROOT	024B3C-I	E-GETSTSYP	.ROOT	019D24-I
E-GETSYP	.ROOT	019D2C-I	E-GETTCB	.ROOT	019CE6-I
E-GETTQE	.ROOT	019A80-I	E-GETUREG	.ROOT	01D4E2-I
E-GETZERO	.ROOT	019BC4-I	E-GOPULL	.ROOT	00A636-I
E-GOWAIT	.ROOT	00A6E6-I	E-H1EEXIT	.ROOT	017324-I
E-H1NCON	.ROOT	017216-I	E-HOLDTIME	.ROOT	0155F0-I
E-IFLVL	.ROOT	012FF8-I	E-IIH	.ROOT	0156E0-I
E-III	.ROOT	00371C-P	E-INDEXC	.ROOT	020826-I
E-INDXIOH	.ROOT	0207D4-I	E-INITBIOC	.ROOT	007E70-I
P-INITBIOC	.ROOT	001010-P	P-INITBIOC	.ROOT	007E70-I
E-INITCARD	.ROOT	00B4E0-I	P-INITCARD	.ROOT	003120-P
P-INITCARD	.ROOT	00B4E0-I	E-INITCASS	.ROOT	00B340-I
P-INITCASS	.ROOT	002F50-P	P-INITCASS	.ROOT	00B340-I
E-INITCMD	.ROOT	007A7C-I	E-INITFLPY	.ROOT	009720-I
P-INITFLPY	.ROOT	002530-P	P-INITFLPY	.ROOT	009720-I
E-INITLPTR	.ROOT	00B740-I	P-INITLPTR	.ROOT	003350-P
P-INITLPTR	.ROOT	00B740-I	E-INITM62E	.ROOT	00A8B0-I
P-INITM62E	.ROOT	002A10-P	P-INITM62E	.ROOT	00A8B0-I
E-INITMAGS	.ROOT	009850-I	P-INITMAGS	.ROOT	002760-P
P-INITMAGS	.ROOT	009850-I	E-INITMHD	.ROOT	008840-I
P-INITMHD	.ROOT	002300-P	P-INITMHD	.ROOT	008840-I
E-INITMMD	.ROOT	008DA0-I	P-INITMMD	.ROOT	0023F0-P
P-INITMMD	.ROOT	008DA0-I	E-INITMTST	.ROOT	026642-I
E-INITRA29	.ROOT	00B640-I	P-INITRA29	.ROOT	00B640-I
E-INITSUBS	.ROOT	00C0C0-I	P-INITSUBS	.ROOT	003420-P
P-INITSUBS	.ROOT	00C0C0-I	E-INITTYKP	.ROOT	007A80-I
P-INITTYKP	.ROOT	000E60-P	P-INITTYKP	.ROOT	007A80-I
E-INITVFCS	.ROOT	00BB38-I	P-INITVFCS	.ROOT	00BB20-I
E-INITYKX	.ROOT	007C70-I	P-INITYKX	.ROOT	000FF0-P
P-INITYKX	.ROOT	007C70-I	E-INTC.F01	.ROOT	025AD0-I
P-INTC.F01	.ROOT	025AD0-I	E-INTERCPT	.ROOT	025AF0-I
E-INX.CINX	.ROOT	0212D4-I	E-INX.FORL	.ROOT	02117E-I
E-INX.READ	.ROOT	02111A-I	E-INX.ZBUF	.ROOT	0210EC-I
E-IODCOM	.ROOT	0178E0-I	E-IODCOM2	.ROOT	017914-I
E-IODGST	.ROOT	017CFC-I	E-IODGST2	.ROOT	017D3E-I
E-IODONE	.ROOT	0178CC-I	E-IODONE2	.ROOT	0178CC-I
E-IODTWT	.ROOT	017D46-I	E-IODTWT2	.ROOT	017D82-I
E-IOEMSG	.ROOT	01516C-I	E-IOERR	.ROOT	0149C6-I
E-IOH6250	.ROOT	00A7D4-I	E-IOHCDVR	.ROOT	00CFBC-I
E-IOHLP	.ROOT	00BACC-I	E-IOSETCC	.ROOT	0177D0-I
E-IPAUSCHK	.ROOT	025AF8-I	E-IRBUFFER	.ROOT	01352A-I
E-IRDRINIT	.ROOT	013538-I	E-IREADER	.ROOT	013534-I

-- IMAGE LINKED AT 13:52:03 ON MARCH 27, 1983 --

SYMBOL	-- NODE	-- ADDRESS	SYMBOL	-- NODE	-- ADDRESS
E-ISH	.ROOT	015812-I	E-ISHRS	.ROOT	0157EC-I
E-ISPTAB	.ROOT	0000D0-P	E-ISR1MMD	.ROOT	0023F0-P
E-ISR1TYKP	.ROOT	000E60-P	E-ISR2MMD	.ROOT	002410-P
E-ISR3MMD	.ROOT	0024A0-P	E-ISR4MMD	.ROOT	0024D8-P
E-ISRCOM	.ROOT	00293E-P	E-ISRERS	.ROOT	002912-P
E-ISREXIT	.ROOT	002968-P	E-ISRLEAVE	.ROOT	00C0E4-I
E-ISRLFC	.ROOT	003716-P	E-ISRLPTR	.ROOT	003350-P
E-ISRM62E	.ROOT	002A10-P	E-ISRMAG1	.ROOT	002760-P
E-ISRPIC	.ROOT	003710-P	E-ISRTOUT	.ROOT	00C0D8-I
E-ISSUEIO	.ROOT	021070-I	E-IT.ALLOC	.ROOT	027534-I
E-IT.CAP	.ROOT	027540-I	E-IT.CHKPT	.ROOT	027540-I
E-IT.CLOSE	.ROOT	027540-I	E-IT.DELET	.ROOT	027534-I
E-IT.FETCH	.ROOT	027540-I	E-IT.OPEN	.ROOT	02752E-I
E-IT.ORJE	.ROOT	027540-I	E-IT.RSLU	.ROOT	02754C-I
E-ITAMCNT	.ROOT	027560-I	E-ITAMFREQ	.ROOT	01DD3A-I
E-ITAMTIMC	.ROOT	027560-I	E-ITEMTLF	.ROOT	027560-I
P-ITFM.M00	.ROOT	027510-I	E-ITFM.M00	.ROOT	027510-I
E-ITM.FREQ	.ROOT	01DD3C-I	E-IVTBL	.ROOT	0079E0-I
E-JOBFLAG	.ROOT	012EFC-I	E-JOBIFLVL	.ROOT	012EFA-I
E-JOBSKIP	.ROOT	012EFE-I	E-JOURNAL	.ROOT	01AE90-I
E-LEAFCON	.ROOT	017A3A-I	E-LEAFQ	.ROOT	017A0A-I
E-LF.FIRST	.ROOT	0072A8-I	E-LF.LAST	.ROOT	007854-I
E-LF11300	.ROOT	007460-I	E-LF1600	.ROOT	0072A8-I
E-LF3900	.ROOT	007408-I	E-LF4900	.ROOT	0075EC-I
E-LF5100	.ROOT	007670-I	E-LF5200	.ROOT	00774C-I
E-LF5500	.ROOT	0074B8-I	E-LF6400	.ROOT	007594-I
E-LF6500	.ROOT	0075C0-I	E-LF6600	.ROOT	00748C-I
E-LF9600	.ROOT	007434-I	E-LFCAS1	.ROOT	00748C-I
E-LFCON	.ROOT	0072A8-I	E-LFCR	.ROOT	007434-I
E-LFCRT	.ROOT	007408-I	E-LFDSCO	.ROOT	0075EC-I
E-LFDSC1	.ROOT	007670-I	E-LFDSC3	.ROOT	00774C-I
E-LFFLP1	.ROOT	0074B8-I	E-LFMAG1	.ROOT	007594-I
E-LFMAG2	.ROOT	0075C0-I	E-LFPR	.ROOT	007460-I
E-LFSET	.ROOT	00C7B8-I	E-LGMBUFF	.ROOT	00440C-I
E-LIKSTACK	.ROOT	009948-I	E-LOAD.SRF	.ROOT	017ED4-I
E-LOADER	.ROOT	012F02-I	E-LOADING	.ROOT	017F24-I
E-LOADLV	.ROOT	0073B0-I	E-LOADSEG	.ROOT	01960C-I
E-LOADTASK	.ROOT	018000-I	E-LOGCKCNT	.ROOT	013DE4-I
E-LOGCKPTI	.ROOT	013DE2-I	E-LOGFLAG	.ROOT	013DE0-I
E-LUCHECK	.ROOT	025190-I	E-LUERROR	.ROOT	011F46-I
E-LUTST	.ROOT	00DF9A-I	E-MAKEXFNM	.ROOT	025480-I
E-MARK	.ROOT	01227A-I	E-MAXLNGTH	.ROOT	00C1DE-I
E-MCHK.F02	.ROOT	025B00-I	P-MCHK.F02	.ROOT	025B00-I
E-MCONFIG	.ROOT	015564-I	E-MDISKINI	.ROOT	017544-I
E-MEMCHK2	.ROOT	025E5A-I	E-MEMCHKER	.ROOT	025F30-I
E-MEMERLV	.ROOT	015564-I	E-MEMERR	.ROOT	0114CA-I
E-MEMFAULT	.ROOT	0157DA-I	E-MEMFLTRS	.ROOT	015788-I
E-MEMONOFF	.ROOT	025B14-I	E-MEMORY	.ROOT	011394-I



-- IMAGE LINKED AT 13:52:03 ON MARCH 27, 1983 --

SYMBOL	-- NODE	-- ADDRESS	SYMBOL	-- NODE	-- ADDRESS
E-MER.CNCL	.ROOT	015568-I	E-MER.LOG	.ROOT	015596-I
E-MER.RSCH	.ROOT	015564-I	E-MER.SCHD	.ROOT	015564-I
E-MERD.CNF	.ROOT	015564-I	E-MERD.STA	.ROOT	015564-I
E-MERD.TEF	.ROOT	015564-I	E-MKOFMEM	.ROOT	026412-I
E-MMASPSW	.ROOT	000BF0-P	E-MMASREG	.ROOT	000BF8-P
E-MMDIOH	.ROOT	0096B0-I	E-MMH	.ROOT	015B88-I
E-MNMFIND	.ROOT	014B36-I	E-MOFFBLK	.ROOT	00F004-I
E-MONBLK	.ROOT	00F166-I	E-MOVE	.ROOT	02586C-I
E-MOVE1	.ROOT	025A78-I	E-MOVENULL	.ROOT	025A8E-I
E-MSG	.ROOT	026FAE-I	E-MSGLOG	.ROOT	014BD8-I
E-MTMRPTNS	.ROOT	01C420-I	E-MTPRCVRB	.ROOT	00A782-I
E-MTPTOUT	.ROOT	00A776-I	E-MTPUNCVR	.ROOT	00A76A-I
E-NBF.CINX	.ROOT	021A72-I	E-NBF.FORL	.ROOT	021BB4-I
E-NBF.POSN	.ROOT	021AF6-I	E-NBUFF00	.ROOT	0215A8-I
E-NBUFFIOH	.ROOT	021564-I	E-NOPRERR	.ROOT	011098-I
E-NSEVREL	.ROOT	017DA4-I	E-NULLIOH	.ROOT	0174BC-I
E-OPD.NRJE	.ROOT	022408-I	E-OPEN.DEV	.ROOT	022340-I
E-OPN.BDSK	.ROOT	0222E8-I	E-OPTIONS	.ROOT	0114E4-I
E-OS.END	.ROOT	0276A4-I	E-OS.PATCH	.ROOT	027584-I
E-PANIC	.ROOT	026924-I	E-PARMERR	.ROOT	014982-I
E-PAUSE	.ROOT	011CEC-I	E-PICADDR	.ROOT	0143F2-I
E-PICESR	.ROOT	01D97E-I	E-PICLV	.ROOT	007358-I
E-PREPRO	.ROOT	014C2C-I	E-PROMODE	.ROOT	012F00-I
E-PSWSAV	.ROOT	019928-I	E-PtrSTACK	.ROOT	003F54-I
E-PUR.SCAN	.ROOT	0190E4-I	E-PUTB	.ROOT	024EE8-I
E-PUTD	.ROOT	025548-I	E-PWLV	.ROOT	00732C-I
E-RDSELCH	.ROOT	00C130-I	E-READ	.ROOT	01112F-I
E-READCMD	.ROOT	011232-I	E-REGBIAS	.ROOT	000DF8-P
E-REGS	.ROOT	00A454-I	E-RELEB	.ROOT	024F66-I
E-RELEFCB	.ROOT	019B54-I	E-RELI0B	.ROOT	017952-I
E-RELMEM	.ROOT	019C3C-I	E-RELPST	.ROOT	0195A8-I
E-RELSDE	.ROOT	019D1C-I	E-RELSYP	.ROOT	019E52-I
E-RELT0B	.ROOT	019CFC-I	E-RELT0B1	.ROOT	019D00-I
E-RELTQE	.ROOT	019A9C-I	E-REMOVE	.ROOT	013398-I
E-REPROTEC	.ROOT	011ECA-I	E-RESET	.ROOT	023DA4-I
E-RESET.IN	.ROOT	0212F6-I	E-RESET.NB	.ROOT	021CE6-I
E-RESET.RW	.ROOT	023DA4-I	E-RESETAB	.ROOT	00C4E6-I
E-RESETBTS	.ROOT	00C52C-I	E-REWIND	.ROOT	00EDAA-I
E-REWINDT	.ROOT	009C70-I	E-ROERMSG	.ROOT	019F18-I
E-ROERMSG	.ROOT	019F53-I	E-ROERNAME	.ROOT	019F38-I
E-ROERSTYP	.ROOT	019F50-I	E-ROERTYPE	.ROOT	019F28-I
E-ROLLPRIO	.ROOT	01DFB2-I	E-RSTVT	.ROOT	00C5B8-I
E-RSTVTALL	.ROOT	00C5B0-I	E-RVOLUME	.ROOT	00FC64-I
E-SCANNER	.ROOT	014B1C-I	E-SCTH	.ROOT	000000-A
E-SCTT	.ROOT	000000-A	E-SECTORBF	.ROOT	010D88-I
E-SEEKCHK	.ROOT	017A06-I	E-SEEKPOS	.ROOT	0179FC-I
E-SEG.ADD	.ROOT	018F9A-I	E-SEG.DIS	.ROOT	019404-I
E-SEG.RMV	.ROOT	018FF8-I	E-SEG.SCAN	.ROOT	0190EA-I

-- IMAGE LINKED AT 13:52:03 ON MARCH 27, 1983 --

SYMBOL	-- NODE	-- ADDRESS	SYMBOL	-- NODE	-- ADDRESS
E-SEGTYPE	.ROOT	019F54-I	E-SEND	.ROOT	012520-I
E-SEQERR	.ROOT	011328-I	E-SET	.ROOT	0115AE-I
E-SET.LRCL	.ROOT	02583C-I	E-SETBUFF	.ROOT	00C220-I
E-SETDELAY	.ROOT	01C7F6-I	E-SEHTAB	.ROOT	00C386-I
E-SETISP	.ROOT	00C1EE-I	E-SETISPS	.ROOT	00C200-I
E-SETLU	.ROOT	014AB2-I	E-SETTOUT	.ROOT	00297A-P
E-SETUTOP	.ROOT	01C798-I	E-SETVTAB	.ROOT	00C3EC-I
E-SFO00	.ROOT	0079B4-I	E-SLICELV	.ROOT	007384-I
E-SPOLFILE	.ROOT	00D176-I	E-SPSET	.ROOT	00C810-I
E-SPT		000060-A	E-SPT.60	.ROOT	003776-I
E-SPT.ADCK	.ROOT	0037B4-I	E-SPT.ADDM	.ROOT	00388C-I
E-SPT.ADK1	.ROOT	0037B8-I	E-SPT.AFSV	.ROOT	00380C-I
E-SPT.CHBK	.ROOT	00374C-I	E-SPT.CLSS	.ROOT	0037AC-I
E-SPT.CPID	.ROOT	00389C-I	E-SPT.CPIE	.ROOT	0038A0-I
E-SPT.CPU	.ROOT	00379E-I	E-SPT.CRSH	.ROOT	003736-I
E-SPT.CSBF	.ROOT	003748-I	E-SPT.CSLV	.ROOT	003744-I
E-SPT.CTCB	.ROOT	00384C-I	E-SPT.CTOP	.ROOT	003750-I
E-SPT.CTSP	.ROOT	003742-I	E-SPT.DATE	.ROOT	0037CC-I
E-SPT.DAY	.ROOT	0037CE-I	E-SPT.DFOW	.ROOT	003864-I
E-SPT.DMT	.ROOT	003778-I	E-SPT.DTHD	.ROOT	0037D8-I
E-SPT.EDMA	.ROOT	003840-I	E-SPT.EFOW	.ROOT	003860-I
E-SPT.EMHD	.ROOT	003844-I	E-SPT.EMTL	.ROOT	003848-I
E-SPT.ERBL	.ROOT	0038C4-I	E-SPT.ESOW	.ROOT	003858-I
E-SPT.FLST	.ROOT	003828-I	E-SPT.FLV	.ROOT	003738-I
E-SPT.FREQ	.ROOT	003798-I	E-SPT.FSYP	.ROOT	00382C-I
E-SPT.HLDA	.ROOT	00387C-I	E-SPT.HLDB	.ROOT	003880-I
E-SPT.INIT	.ROOT	003730-I	E-SPT.IPID	.ROOT	0038C2-I
E-SPT.IQHD	.ROOT	0037E0-I	E-SPT.ISPT	.ROOT	00374E-I
E-SPT.IVT	.ROOT	00376C-I	E-SPT.JRNL	.ROOT	003794-I
E-SPT.LFC	.ROOT	00379C-I	E-SPT.LLV	.ROOT	00373C-I
E-SPT.MCOW	.ROOT	00385C-I	E-SPT.MISS	.ROOT	0038A4-I
E-SPT.MLBL	.ROOT	003740-I	E-SPT.MNTH	.ROOT	0037CC-I
E-SPT.MTM	.ROOT	003774-I	E-SPT.MTOP	.ROOT	003760-I
E-SPT.NODE	.ROOT	0038A8-I	E-SPT.NTCB	.ROOT	003775-I
E-SPT.OFFM	.ROOT	003890-I	E-SPT.OSID	.ROOT	003764-I
E-SPT.OSUP	.ROOT	0037F4-I	E-SPT.PAGE	.ROOT	003884-I
E-SPT.PAGM	.ROOT	003894-I	E-SPT.PANC	.ROOT	0037F8-I
E-SPT.PIC	.ROOT	00379A-I	E-SPT.PID	.ROOT	0038C0-I
E-SPT.PMEM	.ROOT	00375C-I	E-SPT.PSDD	.ROOT	0038B0-I
E-SPT.PSDT	.ROOT	0038B4-I	E-SPT.PSV	.ROOT	0037FC-I
E-SPT.QH	.ROOT	0038B8-I	E-SPT.RDCB	.ROOT	003838-I
E-SPT.RLIO	.ROOT	003870-I	E-SPT.RSOF	.ROOT	00386C-I
E-SPT.RSON	.ROOT	003868-I	E-SPT.RSOW	.ROOT	003854-I
E-SPT.RSV	.ROOT	003804-I	E-SPT.RTCB	.ROOT	003834-I
E-SPT.RTLS	.ROOT	0037E4-I	E-SPT.RVOL	.ROOT	003788-I
E-SPT.SCL	.ROOT	003824-I	E-SPT.SCLP	.ROOT	003888-I
E-SPT.SCTH	.ROOT	0037EC-I	E-SPT.SCTT	.ROOT	0037F0-I
E-SPT.SEGM	.ROOT	003898-I	E-SPT.SNOD	.ROOT	003790-I

-- IMAGE LINKED AT 13:52:03 ON MARCH 27, 1983 --

SYMBOL	-- NODE	-- ADDRESS	SYMBOL	-- NODE	-- ADDRESS
E-SPT.SOPT	.ROOT	0037A0-I	E-SPT.SPCT	.ROOT	00383C-I
E-SPT.SPVL	.ROOT	003784-I	E-SPT.SSTE	.ROOT	0037E0-I
E-SPT.SSTS	.ROOT	0037B2-I	E-SPT.STCB	.ROOT	0038E0-I
E-SPT.SVOL	.ROOT	003780-I	E-SPT.TCMS	.ROOT	0037E8-I
E-SPT.TID	.ROOT	0038BC-I	E-SPT.TIME	.ROOT	0037D4-I
E-SPT.TQHD	.ROOT	0037DC-I	E-SPT.TSL	.ROOT	0037D2-I
E-SPT.TSV	.ROOT	003808-I	E-SPT.TTAB	.ROOT	003770-I
E-SPT.TVOL	.ROOT	00378C-I	E-SPT.UBOT	.ROOT	003758-I
E-SPT.UTCB	.ROOT	012EE0-I	E-SPT.UTOP	.ROOT	003754-I
E-SPT.UTOW	.ROOT	003850-I	E-SPT.VALU	.ROOT	003878-I
E-SPT.VERN	.ROOT	0037A4-I	E-SPT.VMT	.ROOT	00377C-I
E-SPT.YEAR	.ROOT	0037D0-I	P-SPTINIT	.ROOT	000000-P
P-SPTINIT	.ROOT	003730-I	E-SPTTAG	.ROOT	003968-I
E-SQ	.ROOT	007A08-I	E-SQS	.ROOT	0177FC-I
E-SQS.EX	.ROOT	0177F6-I	E-SQS.MLV	.ROOT	017892-I
E-SQS.SLV	.ROOT	01787E-I	E-SQS.TIME	.ROOT	01785C-I
E-SQS.TSL	.ROOT	017870-I	E-SQS2DISP	.ROOT	016238-I
E-START	.ROOT	010F4C-I	E-STATUS	.ROOT	00A39C-I
E-STRTINTC	.ROOT	025AF0-I	E-SUBCKRPT	.ROOT	01C3B8-I
E-SUBRPORT	.ROOT	01C3BA-I	E-SUBRPTNS	.ROOT	01C416-I
E-SV1ADER1	.ROOT	016FBA-I	E-SV1ERTB	.ROOT	015118-I
E-SV1FCER	.ROOT	0173A2-I	E-SV3.TERM	.ROOT	01B194-I
E-SV4.ENAC	.ROOT	015600-I	E-SV4.ERR3	.ROOT	01B8CE-I
E-SV4.NEXT	.ROOT	01B8B4-I	E-SV4.RDAC	.ROOT	015600-I
E-SV4.RMAW	.ROOT	015600-I	E-SV4ICONT	.ROOT	025AE4-I
E-SV4ICRSP	.ROOT	025AE4-I	E-SV4ICRTE	.ROOT	025AE4-I
E-SV4IGET	.ROOT	025AE4-I	E-SV4IPROC	.ROOT	025AE4-I
E-SV4IPUT	.ROOT	025AE4-I	E-SV4IREMV	.ROOT	025AE4-I
E-SV4IROLL	.ROOT	025AE4-I	E-SV4ITERM	.ROOT	025AE4-I
E-SV4ITRAP	.ROOT	025AE4-I	E-SV6ERCD	.ROOT	01BACC-I
E-SV6ERTB	.ROOT	01BAF0-I	E-SV7.CMD	.ROOT	02203C-I
E-SV9.ASQ	.ROOT	01DDC4-I	E-SV9.ASQ1	.ROOT	01DDBE-I
E-SV9.ATQ	.ROOT	01DDBA-I	E-SV9.ATQ1	.ROOT	01DDB4-I
E-SV9.STSW	.ROOT	01DEEE-I	E-SV9.TSWN	.ROOT	01DEE8-I
E-SVC1	.ROOT	016DB4-I	E-SVC1.0	.ROOT	016DB6-I
E-SVC10	.ROOT	01CB14-I	E-SVC14	.ROOT	01B74A-I
E-SVC15	.ROOT	027522-I	E-SVC1BFM	.ROOT	017052-I
E-SVC1BSR	.ROOT	017052-I	E-SVC1DDF	.ROOT	017052-I
E-SVC1EXIT	.ROOT	01733C-I	E-SVC1FFM	.ROOT	017052-I
E-SVC1FSR	.ROOT	017052-I	E-SVC1HALT	.ROOT	0171C0-I
E-SVC1IA	.ROOT	017406-I	E-SVC1INA	.ROOT	017400-I
E-SVC1NIA	.ROOT	01740E-I	E-SVC1NINA	.ROOT	01741C-I
E-SVC1NOOP	.ROOT	0173C0-I	E-SVC1READ	.ROOT	017014-I
E-SVC1REW	.ROOT	017052-I	E-SVC1TEST	.ROOT	017164-I
E-SVC1WAIT	.ROOT	0170C8-I	E-SVC1WFM	.ROOT	017052-I
E-SVC1WRIT	.ROOT	017014-I	E-SVC2	.ROOT	019F94-I
E-SVC2.10	.ROOT	01DCEA-I	E-SVC2.11	.ROOT	01D0EE-I
E-SVC2.14	.ROOT	013524-I	E-SVC2.2	.ROOT	019954-I

-- IMAGE LINKED AT 13:52:03 ON MARCH 27, 1983 --

SYMBOL	--	NODE	--	ADDRESS	SYMBOL	--	NODE	--	ADDRESS
E-SVC2.20	.	ROOT		019A40-I	E-SVC2.21	.	ROOT		019A4C-I
E-SVC2.23	.	ROOT		01D104-I	E-SVC2.24	.	ROOT		0155FA-I
E-SVC2.25	.	ROOT		0155FA-I	E-SVC2.3	.	ROOT		019A04-I
E-SVC2.7	.	ROOT		00CA84-I	E-SVC2.8	.	ROOT		01CF54-I
E-SVC2.9	.	ROOT		01D04E-I	E-SVC3	.	ROOT		01B184-I
E-SVC4	.	ROOT		01B76E-I	E-SVC5	.	ROOT		01B93A-I
E-SVC6	.	ROOT		01BBF0-I	E-SVC7	.	ROOT		021E94-I
E-SVC7PBLK	.	ROOT		00E84C-I	E-SVC9	.	ROOT		01B6A2-I
E-SYSINIT	.	ROOT		01629A-I	E-TABSCAN	.	ROOT		00C352-I
E-TASK	.	ROOT		0118A4-I	E-TASKERR	.	ROOT		010EFC-I
E-TCBLOOK	.	ROOT		018F64-I	E-TCBLOOK2	.	ROOT		018F66-I
E-TCBTAB	.	ROOT		0038DC-I	E-TCOM	.	ROOT		013470-I
E-TCPU.TCB	.	ROOT		0155E4-I	E-TCPU.TIM	.	ROOT		0155DC-I
E-TCPU.TYP	.	ROOT		0155E8-I	E-TEMPFILE	.	ROOT		00D016-I
E-TERM	.	ROOT		01A976-I	E-TERM1	.	ROOT		01A97C-I
E-TERMBIOC	.	ROOT		008364-I	E-TERMCASS	.	ROOT		00B47C-I
E-TERMCHK	.	ROOT		014B2A-I	E-TERMFLP	.	ROOT		009800-I
E-TERMLPTR	.	ROOT		00B9EE-I	E-TERMM62E	.	ROOT		00AA12-I
E-TERMMAGS	.	ROOT		0099CC-I	E-TERMMHD	.	ROOT		008A40-I
E-TERMMMD	.	ROOT		0092A0-I	E-TERMNCRD	.	ROOT		00B614-I
E-TERMTYKP	.	ROOT		007BDE-I	E-TESTPRT	.	ROOT		0154A6-I
E-TESTRDY	.	ROOT		00A514-I	E-TESTRS	.	ROOT		02413C-I
E-TESTVFC	.	ROOT		00C22A-I	E-TICAN	.	ROOT		01D6C8-I
E-TICAN1	.	ROOT		01D6CC-I	E-TIFXTCHN	.	ROOT		01D7BC-I
E-TIMELV	.	ROOT		007300-I	E-TIMEOUT	.	ROOT		01AE94-I
E-TIMERR	.	ROOT		014A94-I	E-TIMESR	.	ROOT		01DA82-I
E-TM.FEB	.	ROOT		01DD27-I	E-TM.FREQ	.	ROOT		01DD24-I
E-TM30DAYS	.	ROOT		01DD25-I	E-TMCHN	.	ROOT		01E9FC-I
E-TMCPUOFF	.	ROOT		0155D4-I	E-TMCPUON	.	ROOT		0155D6-I
E-TMDISP	.	ROOT		01DFA0-I	E-TMNSOUT	.	ROOT		01E64C-I
E-TMRD.MAC	.	ROOT		01E0B2-I	E-TMRDISP	.	ROOT		01DFB4-I
E-TMREM W	.	ROOT		01E984-I	E-TMRSAIN	.	ROOT		01E724-I
E-TMRS AOUT	.	ROOT		01E8E2-I	E-TMRSARS	.	ROOT		01E826-I
E-TMRSIN	.	ROOT		01E73C-I	E-TMRSIN1	.	ROOT		01E73C-I
E-TMRSOTNS	.	ROOT		01E8A4-I	E-TMRSOUT	.	ROOT		01E896-I
E-TMRSRSA	.	ROOT		01E846-I	E-TMSTART	.	ROOT		01E676-I
E-TMSTOP	.	ROOT		01E6DE-I	E-TMSTOPW	.	ROOT		01E6D8-I
E-TMUCHN	.	ROOT		01EA60-I	E-TOCHOFF	.	ROOT		01DD62-I
E-TOCHON	.	ROOT		01DD3E-I	E-TOFBUF	.	ROOT		00C7B4-I
E-TOFLFS	.	ROOT		00C7B7-I	E-TOITAMIO	.	ROOT		017EAE-I
E-TOPCSRCH	.	ROOT		0270A6-I	E-TYKP.IOH	.	ROOT		007C28-I
E-TYKPBARW	.	ROOT		000FDA-P	E-TYKPCR	.	ROOT		000FC8-P
E-TYKPHMRK	.	ROOT		000FC0-P	E-UBOT	.	ROOT		0276A4-I
E-UBOT.0	.	ROOT		027584-I	E-UBOT.F01	.	ROOT		027570-I
P-UBOT.F01	.	ROOT		027570-I	E-UNPACK	.	ROOT		01AE28-I
E-VFC.FFB	.	ROOT		00C0B8-I	E-VFC.LFB	.	ROOT		00C068-I
E-VFC.SPB	.	ROOT		00BFE4-I	E-VFC.VTB	.	ROOT		00C0BC-I
E-VFCDIR	.	ROOT		00BB86-I	E-VFCIGNOR	.	ROOT		00BF70-I

-- IMAGE LINKED AT 13:52:03 ON MARCH 27, 1983 --

SYMBOL	-- NODE	-- ADDRESS	SYMBOL	-- NODE	-- ADDRESS
E-VFCLFPIS	.ROOT	00BE78-I	E-VFCLFPND	.ROOT	00BB6A-I
E-VFCNEXTA	.ROOT	00BDF8-I	E-VFCTLT	.ROOT	00C234-I
E-VFUTLT	.ROOT	00C300-I	E-VFUTLTCH	.ROOT	00C368-I
E-VMT	.ROOT	007260-I	E-VMT.DSCO	.ROOT	007274-I
E-VMT.DSC1	.ROOT	00727C-I	E-VMT.DSC2	.ROOT	007284-I
E-VMT.DSC3	.ROOT	00728C-I	E-VMT.DSC4	.ROOT	007294-I
E-VMT.DSC5	.ROOT	00729C-I	E-VMT.FLP1	.ROOT	007264-I
E-VMT.FLP2	.ROOT	00726C-I	E-VMTLOOK	.ROOT	025594-I
E-VOLUME	.ROOT	00FF40-I	E-VTBUF	.ROOT	00C860-I
E-WAITIO	.ROOT	01709E-I	E-WAITRS	.ROOT	0240EC-I
E-WFILE	.ROOT	00ED8C-I	E-WFM	.ROOT	009FBA-I
E-WRITE	.ROOT	011092-I	E-WRITEM	.ROOT	009A66-I
E-WRTSELRD	.ROOT	00C0EA-I	E-WRTSELWT	.ROOT	00C112-I
E-XAIDSBK	.ROOT	014FB4-I	E-XALLOCAT	.ROOT	01013E-I
E-XDELETE	.ROOT	0100B6-I	E-XDMTLOOK	.ROOT	025AF6-I
E-XLTBIOC	.ROOT	00872C-I	E-XLTBIOC2	.ROOT	0087AC-I
E-XLTPECRT	.ROOT	00876C-I	E-XREGS	.ROOT	016D54-I
E-XTCBLOOK	.ROOT	025AF6-I			

PERKIN-ELMER SYSGEN/32 03-356 R00-01

COPY

MCALL DCBI,CCBI,CONVNUM,EVNGEN  
MCALL MMDGEN,MTPI

ENDCOPY

VERSION OS32MTS2

CPU 3220

MEMORY 1024

DSYS 50

MEMCHECK

DEVADS 3

FLOAT S,S

CLOCK 60,6C,6D

BACKGROUND 16,50

VOLUME MT6A

TEMP MT6A

DIRECTORY

DISCBLOCK 32

CSS 8

CMDLEN 100

LOGLEN 100

DEVICES

CON: ,10,39,XDCOD=X2AOD,CONS

CRT: ,12,39,XDCOD=X2AOD

CR: ,4,96

PR: ,62,113

FLP1: ,C1,55,SPINDLE=0

FLP2: ,C1,55,SPINDLE=1

MAG1: ,85,64,SELCH=FO,CONTR=0

MAG2: ,C5,65,SELCH=FO,CONTR=1

MAG3: ,85,68,SELCH=FO,CONTR=2

MAG4: ,85,69,SELCH=FO,CONTR=3

MAG5: ,85,70,SELCH=FO,CONTR=4

DSC0: ,C8,49,SELCH=FO,CONTR=B6

DSC1: ,C6,51,SELCH=FO,CONTR=B6

DSC2: ,C7,50,SELCH=FO,CONTR=B6

DSC3: ,FC,52,SELCH=FO,CONTR=FB

DSC4: ,FC,53,SELCH=FO,CONTR=FB

DSC5: ,FC,54,SELCH=FO,CONTR=FB

ENDD

ENDC

\*OS32MTS2 SYSTEM 03-120F02

\*CPU = 3220

\*MEMORY = 1024-KB

\*SYSTEM SPACE = 50-KB

\*MEMORY DIAGNOSTICS INCLUDED

\*MAX OF 1023 DEVICES IN SYSTEM

\*FLOATING POINT SOFTWARE SUPPORT

\*60-HZ, LFC=6C, PIC=6D

\*BACKGROUND TASK'S PRIORITIES

\*DEFAULT SYSTEM VOLUME

\*DEFAULT TEMPORARY VOLUME

\*CORE DIRECTORY INCLUDED

\*DISCFILE BLOCKING FACTOR=32 SECT.

\*CSS NESTING DEPTH

\*COMMAND BUFFER LENGTH = 100 BYTES

\*LOG BUFFER LENGTH = 100 BYTES

\*CONSOLE - PE 550/PE 1100

\*PE 550/PE 1100

\*CARD READER

\*300-LPM LINE PRINTER

\*FLOPPY DISC-1

\*FLOPPY DISC-2

\* 800-BPI TAPE

\*1600-BPI TAPE

\*6250-BPI TAPE HPTD-125 CONTROLLER

\*6250-BPI TAPE STC CONTROLLER

\*6250-BPI TAPE TELEX CONTROLLER

\*2.5-MB DISC (REMOVEABLE)

\* 5-MB DISC (REMOVEABLE)

\* 5-MB DISC (FIXED)

\* 40-MB DISC (REMOVEABLE)

\* 67-MB DISC (REMOVEABLE)

\*256-MB DISC (REMOVEABLE)

FILE NAME: M67A:OS32MTS2.OS/140 -- PACKAGE NAME: OS32MTS2.OS -- RECORDS: 633

UBOT: 0 -- UTOP: 27510 -- CTOP: 275FE -- SIZE: 157.50 KB

LEVEL NAME	LENGTH	PURE	IMPURE	COMMON	TABLES
0 .ROOT	27510	32D0	24240	0	0
(TOTALS)	27510	32D0	24240	0	0

VIRTUAL ADDRESS MAP:

FROM	TO	SEGMENT NAME	SIZE	ACCESS
000000	0275FF	.ROOT	157.50 KB	RWE

NODE: .ROOT - LEVEL: 0 - ADDRESS: 0 - SIZE: 27510 - PARENT:

SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS
E-SCTT	000000-A	E-SCTH	000000-A	E-SPT	000060-A
P-SPTINIT	000000-P	E-ISPTAB	0000D0-P	P-DCBS	000A00-P
E-CCB3900	000A00-P	E-CCX3900	000A1C-P	E-CCB3901	000A40-P
E-CCX3901	000A5C-P	E-CCB9600	000A80-P	E-CCB11300	000A9C-P
E-CCBFLP1	000AB8-P	E-CCB5500	000AB8-P	E-CCBFLP2	000AD4-P
E-CCB5501	000AD4-P	E-CCBMAG1	000AF0-P	E-CCB6400	000AF0-P
E-CCB6500	000B0C-P	E-CCB6800	000B28-P	E-CCB6900	000B44-P
E-CCB7000	000B60-P	E-CCBDSCO	000B7C-P	E-CCB4900	000B7C-P
E-CCBDSC1	000B98-P	E-CCB5100	000B98-P	E-CCBDSC3	000BB4-P
E-CCB5200	000BB4-P	P-EVNGEN	000BD0-P	E-MMASREG	000BD0-P
E-REGBIAS	000DD8-P	P-INITBIOC	000E80-P	E-BIO.PPTO	002160-P
E-BIO.OCIV	002162-P	P-INITMHD	002170-P	P-INITMMD	002260-P
E-ISR1MMD	002260-P	E-ISR2MMD	002280-P	E-ISR3MMD	002310-P
E-ISR4MMD	002348-P	P-INITFLPY	0023A0-P	P-INITMAGS	0025D0-P
E-ISMAG1	0025D0-P	E-ISRERS	002782-P	E-ISRCOM	0027AE-P
E-ISREXIT	0027D8-P	E-SETTOUT	0027EA-P	P-INITM62E	002880-P
E-ISM62E	002880-P	P-INITCARD	002CC0-P	P-INITLPTR	002EF0-P
E-ISRLPTR	002EF0-P	P-INITSUBS	002FC0-P	P-EXIN.F53	002FF0-P
P-EXTI.F01	0032B0-P	E-ISRPIC	0032B0-P	E-ISRLFC	0032B6-P
E-III	0032BC-P	P-SPTINIT	0032D0-I	E-SPT.INIT	0032D0-I
E-SPT.CRSH	0032D6-I	E-SPT.FLV	0032D8-I	E-SPT.LLV	0032DC-I
E-SPT.MLBL	0032E0-I	E-SPT.CTSP	0032E2-I	E-SPT.CSLV	0032E4-I
E-SPT.CSBF	0032E8-I	E-SPT.CHBK	0032EC-I	E-SPT.ISPT	0032EE-I
E-SPT.CTOP	0032F0-I	E-SPT.UTOP	0032F4-I	E-SPT.UBOT	0032F8-I
E-SPT.PMEM	0032FC-I	E-SPT.MTOP	003300-I	E-SPT.OSID	003304-I
E-SPT.IVT	00330C-I	E-SPT.TTAB	003310-I	E-SPT.MTM	003314-I
E-SPT.NTCB	003315-I	E-SPT.60	003316-I	E-SPT.DMT	003318-I
E-SPT.VMT	00331C-I	E-SPT.SVOL	003320-I	E-SPT.SPVL	003324-I
E-SPT.RVOL	003328-I	E-SPT.TVOL	00332C-I	E-SPT.SNOD	003330-I
E-SPT.JRNL	003334-I	E-SPT.FREQ	003338-I	E-SPT.PIC	00333A-I
E-SPT.LFC	00333C-I	E-SPT.CPU	00333E-I	E-SPT.SOPT	003340-I
E-SPT.VERN	003344-I	E-SPT.CLSS	00334C-I	E-SPT.SSTE	003350-I
E-SPT.SSTS	003352-I	E-SPT.ADCK	003354-I	E-SPT.ADK1	003358-I
E-SPT.MNTH	00336C-I	E-SPT.DATE	00336C-I	E-SPT.DAY	00336E-I
E-SPT.YEAR	003370-I	E-SPT.TSL	003372-I	E-SPT.TIME	003374-I
E-SPT.DTHD	003378-I	E-SPT.TQHD	00337C-I	E-SPT.IQHD	003380-I
E-SPT.RTLS	003384-I	E-SPT.TCMS	003388-I	E-SPT.SCTH	00338C-I
E-SPT.SCTT	003390-I	E-SPT.OSUP	003394-I	E-SPT.PANC	003398-I
E-SPT.PSV	00339C-I	E-SPT.RSV	0033A4-I	E-SPT.TSV	0033A8-I
E-SPT.AFSV	0033AC-I	E-SPT.SCL	0033C4-I	E-SPT.FLST	0033C8-I
E-SPT.FSYP	0033CC-I	E-SPT.RTCB	0033D4-I	E-SPT.RDCB	0033D8-I
E-SPT.SPCT	0033DC-I	E-SPT.EDMA	0033E0-I	E-SPT.EMHD	0033E4-I
E-SPT.EMTL	0033E8-I	E-SPT.CTCB	0033EC-I	E-SPT.UTOW	0033F0-I
E-SPT.RSOW	0033F4-I	E-SPT.ESOW	0033F8-I	E-SPT.MCOW	0033FC-I
E-SPT.EFOW	003400-I	E-SPT.DFOW	003404-I	E-SPT.RSON	003408-I
E-SPT.RSOF	00340C-I	E-SPT.RLIO	003410-I	E-SPT.VALU	003418-I



SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS
E-SPT.HLDA	00341C-I	E-SPT.HLDB	003420-I	E-SPT.PAGE	003424-I
E-SPT.SCLP	003428-I	E-SPT.ADDM	00342C-I	E-SPT.OFFM	003430-I
E-SPT.PAGM	003434-I	E-SPT.SEGM	003438-I	E-SPT.CPID	00343C-I
E-SPT.CPIE	003440-I	E-SPT.MISS	003444-I	E-SPT.NODE	003448-I
E-SPT.PSDD	003450-I	E-SPT.PSDT	003454-I	E-SPT.QH	003458-I
E-SPT.TID	00345C-I	E-SPT.PID	003460-I	E-SPT.IPID	003462-I
E-SPT.ERBL	003464-I	E-TCBTAB	00347C-I	E-SPT.STCB	003480-I
E-SPTTAG	003508-I	E-CMDPTCB	003800-I	E-PTRSTACK	003AF4-I
E-CMDBUFFS	003B20-I	F-LGMBUFF	003FAC-I	P-DMTINIT	004020-I
E-DMTNULL	004020-I	E-DMT	004020-I	E-DMT.COM	004028-I
E-DMT.CRT	004030-I	E-DMT.CR	004038-I	E-DMT.PR	004040-I
E-DMT.FLP1	004048-I	E-DMT.FLP2	004050-I	E-DMT.MAG1	004058-I
E-DMT.MAG2	004060-I	E-DMT.MAG3	004068-I	E-DMT.MAG4	004070-I
E-DMT.MAG5	004078-I	E-DMT.DSCO	004080-I	E-DMT.DSC1	004088-I
E-DMT.DSC2	004090-I	E-DMT.DSC3	004098-I	E-DMT.DSC4	0040A0-I
E-DMT.DSC5	0040A8-I	P-DCBS	0040C0-I	E-DCB3900	0040C0-I
E-DCB.CON	0040C0-I	E-DCB3901	0042D8-I	E-DCB.CRT	0042D8-I
E-DCB9600	0044F0-I	E-DCB.CR	0044F0-I	E-DCB11300	00458C-I
E-DCB.PR	00458C-I	E-DCB5500	0046B0-I	E-DCB.FLP1	0046B0-I
E-DCB5501	004A4C-I	E-DCB.FLP2	004A4C-I	E-DCB6400	004DE8-I
E-DCB.MAG1	004DE8-I	E-DCB6500	004FA8-I	E-DCB.MAG2	004FA8-I
E-DCB6800	005168-I	E-DCB.MAG3	005168-I	E-DCB6900	005328-I
E-DCB.MAG4	005328-I	F-DCB7000	0054E8-I	E-DCB.MAG5	0054E8-I
E-DCB4900	0056A8-I	E-DCB.DSCO	0056A8-I	E-DCB5100	005A44-I
E-DCB.DSC1	005A44-I	E-DCB5000	005DE0-I	E-DCB.DSC2	005DE0-I
E-DCB5200	00617C-I	E-DCB.DSC3	00617C-I	E-DCB5300	006518-I
E-DCB.DSC4	006518-I	E-DCB5400	006990-I	E-DCB.DSC5	006990-I
P-EVNGEN	006E40-I	E-VMT	006E40-I	E-VMT.FLP1	006E44-I
E-VMT.FLP2	006E4C-I	E-VMT.DSCO	006E54-I	E-VMT.DSC1	006E5C-I
E-VMT.DSC2	006E64-I	E-VMT.DSC3	006E6C-I	E-VMT.DSC4	006E74-I
E-VMT.DSC5	006E7C-I	E-LFCON	006E88-I	E-LF3900	006E88-I
E-LF.FIRST	006E88-I	E-EVT	006E88-I	E-DMLV	006EB4-I
E-TIMELV	006EE0-I	E-PWLV	006F0C-I	E-PICLV	006F38-I
E-SLICELV	006F64-I	E-LOADLV	006F90-I	E-CBUFLV	006FBC-I
E-LFCRT	006FE8-I	E-LF3901	006FE8-I	E-LFCR	007014-I
E-LF9600	007014-I	E-LFPR	007040-I	E-LF11300	007040-I
E-LFFLP1	00706C-I	E-LF5500	00706C-I	E-BIT5500	007098-I
E-DIR5500	0070C4-I	E-BIT5501	0070F0-I	E-DIR5501	00711C-I
E-LFMAG1	007148-I	E-LF6400	007148-I	E-LFMAG2	007174-I
E-LF6500	007174-I	E-LFDSCO	0071A0-I	E-LF4900	0071A0-I
E-BIT4900	0071CC-I	E-DIR4900	0071F8-I	E-LFDSC1	007224-I
E-LF5100	007224-I	E-BIT5100	007250-I	E-DIR5100	00727C-I
E-BIT5000	0072A8-I	E-DIR5000	0072D4-I	E-LFDSC3	007300-I
E-LF5200	007300-I	E-BIT5200	00732C-I	E-DIR5200	007358-I
E-BIT5300	007384-I	E-DIR5300	0073B0-I	E-BIT5400	0073DC-I
E-LF.LAST	007408-I	E-DIR5400	007408-I	E-C000	007434-I
E-C100	007460-I	E-C200	00748C-I	E-C300	0074B8-I
E-C400	0074E4-I	E-CB600	007510-I	E-CFB00	00753C-I

SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS
E-SF000	007568-I	E-IVTBL	007594-I	E-SQ	0075BC-I
E-INITCMD	007628-I	P-INITBIOC	007630-I	E-INITBIOC	007630-I
E-BIOC.ID	00764C-I	E-TERMBIOC	007B24-I	E-BIOC.IOH	007CBC-I
E-XLTBIOC	007EEC-I	E-XLTPECRT	007F2C-I	E-XLTBIOC2	007F6C-I
P-INITMHD	008000-I	E-INITMHD	008000-I	E-SINITMHD	008018-I
E-TERMMHD	008200-I	P-INITMMD	008560-I	E-INITMMD	008560-I
E-SINITMMD	008578-I	E-TERMMMD	008A60-I	E-ESR1MMD	008A60-I
E-ESR2MMD	008AA4-I	E-ESR3MMD	008AC8-I	E-ESR4MMD	008DD0-I
E-ESR5MMD	008E34-I	F-MMDIOH	008E70-I	P-INITFLPY	008EE0-I
E-INITFLPY	008EE0-I	E-SINITFLP	008F00-I	E-CMDFLP	008FBA-I
E-TERMFLP	008FC0-I	P-INITMAGS	009010-I	E-INITMAGS	009010-I
E-LIKSTACK	009108-I	E-TERMMAGS	00918C-I	E-WRITEM	009226-I
E-CMDMAGS	0093A4-I	E-REWINDT	009430-I	E-FSR	009462-I
E-FSRPRIM	009496-I	E-BSR	00952A-I	E-BSRPRIM	009562-I
E-BFM	00963C-I	E-FFM	0096DC-I	E-WFM	00977A-I
E-ERASE	0099A2-I	E-ERASE1	009A90-I	E-ESRERS	009AD2-I
E-ESRTOUT	009B34-I	E-CHECKDU	009B44-I	E-STATUS	009B5C-I
E-FIREIO	009BCA-I	E-DIRREGS	009BF0-I	E-REGS	009C14-I
E-FIRECMD	009C24-I	E-CMDSCAN	009C48-I	E-EOFTEST	009C68-I
E-EOTTESTF	009CBE-I	E-TESTRDY	009CD4-I	E-BOTCHECK	009CE8-I
E-CRASH	009DF0-I	E-GOPULL	009DF6-I	E-CHCKDDPS	009E82-I
E-GOWAIT	009EA6-I	E-ERRDU	009F02-I	E-ERRRECOV	009FOC-I
E-ERRUNREC	009F16-I	E-MTPUNCVR	009F2A-I	E-MTPTOUT	009F36-I
E-MTPRCVRB	009F42-I	E-ERROR	009F70-I	E-IOH6250	009F94-I
P-INITM62E	00A070-I	E-INITM62E	00A070-I	E-TERMM62E	00A1D2-I
E-CMDM62E	00A7C4-I	P-INITCARD	00AB00-I	E-INITCARD	00AB00-I
E-CARDHARD	00ABB2-I	E-TERMNCRD	00AC34-I	P-INITRA29	00AC60-I
E-INITRA29	00AC60-I	P-INITLPTR	00AD60-I	E-INITLPTR	00AD60-I
E-TERMLPTR	00B00E-I	E-IOHLP	00B0EC-I	P-INITVFCS	00B140-I
E-INITVFCS	00B158-I	E-VFCLFPND	00B18A-I	E-VFCLFPIS	00B198-I
E-VFCDIR	00B1A6-I	E-VFCNEXTA	00B418-I	E-VFCIGNOR	00B590-I
E-VFC.SPB	00B604-I	E-VFC.LFB	00B688-I	E-VFC.FFB	00B6D8-I
E-VFC.VTB	00B6DC-I	P-INITSUBS	00B6E0-I	E-INITSUBS	00B6E0-I
E-ISRTOUT	00B6F8-I	E-ISRLEAVE	00B704-I	E-WRTSELRD	00B70A-I
E-WRTSELWT	00B732-I	E-RDSELCH	00B750-I	E-ENDSCAN	00B774-I
E-ENDSCAN1	00B7AE-I	E-MAXLNGTH	00B7FE-I	E-SETISP	00B80E-I
E-SETISPS	00B820-I	E-DIREXIT	00B826-I	E-GETBUFF	00B834-I
E-SETBUFF	00B840-I	E-TESTVFC	00B84A-I	E-VFCTLT	00B854-I
E-VFUTLT	00B920-I	F-TABSCAN	00B972-I	E-VFUTLTCH	00B988-I
E-GETBUFCH	00B99C-I	E-SEHTAB	00B9A6-I	E-SETVTAB	00BA0C-I
E-RESETAB	00BB06-I	E-RESETBTS	00BB4C-I	E-CNVNUM	00BB58-I
E-RSTVTALL	00BBD0-I	E-RSTVT	00BBD8-I	E-DOWNLD	00BCC0-I
E-TOFBUF	00BDD4-I	E-TOFLFS	00BDD7-I	E-LFSET	00BDD8-I
E-SPSET	00BE30-I	E-VTBUF	00BE80-I	E-GENXLATE	00BE84-I
P-CDVR.F01	00C090-I	E-CDVR.F01	00C090-I	E-SVC2.7	00C0A4-I
E-CIOINCP	00C16E-I	E-EXECMSG	00C1CC-I	E-CDSV27	00C2FE-I
E-CDEXTM	00C332-I	E-CDESV3	00C346-I	E-CDFUTB	00C364-I
E-CDEXMY	00C374-I	E-CDEXIN	00C3B2-I	E-CONDVR	00C400-I

SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS
E-DCBCMD	00C544-I	E-IOHCDVR	00C5DC-I	P-CMDB.F33	00C620-I
E-CMDB.F33	00C620-I	E-DSPFHD	00C634-I	E-TEMPFILE	00C636-I
E-SPOLFILE	00C796-I	E-DISPLAY	00D2FA-I	E-LUTST	00D5BA-I
E-DISPFD	00DAF0-I	E-CHECK.ID	00DE1E-I	E-CHECKID	00DE22-I
E-SVC7PBLK	00DE6C-I	E-DEBUGNOPR	00E392-I	E-WFILE	00E3AC-I
E-FFILE	00E3B2-I	E-FORREC	00E3B8-I	E-BFILE	00E3BE-I
E-BACREC	00E3C4-I	E-REWIND	00E3CA-I	E-MOFFBLK	00E624-I
E-MONBLK	00E786-I	E-RVOLUME	00F284-I	E-VOLUME	00F460-I
E-XDELETE	00F6D6-I	E-CMDELETE	00F6DA-I	E-XALLOCAT	00F75E-I
E-ALLOCATE	00F800-I	E-DISPIND1	0102D0-I	E-DISPIND2	0102D2-I
E-DIRFN	0102DC-I	E-DIREXT	0102E4-I	E-SECTORBF	0103A8-I
P-CMEX.F33	0104B0-I	E-CMEX.F33	0104B0-I	E-CONTINUE	0104C4-I
E-TASKERR	01051C-I	E-START	01056C-I	E-CANCEL	0105F2-I
E-BIAS	010630-I	E-WRITE	0106B2-I	E-NOPRERR	0106B8-I
E-READ	01074E-I	E-READCMDF	010852-I	E-SEQERR	010948-I
E-MEMORY	0109B4-I	E-MEMERR	010AEA-I	E-OPTIONS	010B04-I
E-SET	010BCE-I	E-TASK	010EC4-I	E-PAUSE	01130C-I
E-CMCLOSE	01135E-I	E-CMRENAME	011426-I	E-REPROTEC	0114EA-I
E-ASSIGN	011542-I	E-LUERROR	011566-I	E-ASGNERR	011718-I
E-FDERROR	011750-I	E-CMDASGN1	011872-I	E-CMDCLOSE	011890-I
E-MARK	01189A-I	E-SEND	011B40-I	E-.SPL	011B78-I
E-.MTM	011B8C-I	E-BUILD	011E08-I	E-\$BUILD	011E28-I
E-BUILD DSP	011E32-I	E-\$JOB	011E6C-I	E-\$SKIP	011EAA-I
E-SEXIT	011ED4-I	E-\$CLEAR	011F22-I	E-\$TERMJOB	011F62-I
E-STRANS	011F9C-I	E-\$IFG	011FDA-I	E-\$IFL	011FE6-I
E-\$IFE	011FF2-I	E-\$IFNG	011FFE-I	E-\$IFNL	01200A-I
E-\$IFNE	012016-I	E-\$IFNULL	012022-I	E-\$IFNULL	01203A-I
E-\$IFX	012050-I	E-\$IFNX	01205A-I	E-\$ELSE	0120AA-I
E-\$ENDC	0120DA-I	E-\$WRITE	0120FE-I	E-\$COPY	01214E-I
E-\$NOCOPY	01215A-I	E-GETFRAC	01215E-I	E-SPT.UTCB	012500-I
E-CMDBGT	012504-I	E-CMDBIAS	012508-I	E-CMDBGTRC	01250E-I
E-BUILD FLG	012510-I	E-CSSLEVEL	012512-I	E-CSSLIST	012514-I
E-CSSSKIP	012516-I	E-IFLVL	012518-I	E-JOBIFLVL	01251A-I
E-JOBFLAG	01251C-I	E-JOBSKIP	01251E-I	E-PROMODE	012520-I
E-LOADER	012522-I	E-REMOVE	0129B8-I	E-TCOM	012A90-I
E-ERRORC	012AE8-I	P-CMIR.F01	012B30-I	E-CMIR.F01	012B30-I
E-SVC2.14	012B44-I	E-IRBUFFER	012B4A-I	E-IREADER	012B54-I
E-IRDRINIT	012B58-I	P-CMON.F01	012B60-I	E-CMON.F01	012B60-I
E-CMSP.JDL	012B74-I	E-COMMAND	012C10-I	E-CMDP.TCB	013348-I
E-ATTN.P	0133ED-I	E-LOGFLAG	013400-I	E-LOGCKPTI	013402-I
E-LOGCKCNT	013404-I	P-CMSP.F33	013490-I	E-CMSP.F33	013490-I
E-CMDP.UDL	0134A4-I	E-CMDP.Q	013524-I	E-CMDEMPY	0135CC-I
E-CMDP.GO	013768-I	E-PICADDR	013A12-I	E-FLTPFLAG	013A2C-I
E-CMDNEXT	013A58-I	E-CSKIPA	013B3E-I	E-CSSTST	013BC4-I
E-CMDPSYSG	013F52-I	E-FORMERR	013F9A-I	E-PARMERR	013FA2-I
E-IOERR	013FE6-I	E-CMDERROR	013FEE-I	E-CMDERREX	013FFC-I
E-ERR.COM	01407C-I	E-ERR.COM1	014080-I	E-ERR.ASGN	014088-I
E-TIMERR	0140B4-I	E-SETLU	0140D2-I	E-CHECKCSL	0140FE-I

SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS
E-COMMACK1	014128-I	E-COMMACK	014128-I	E-SCANNER	01413C-I
E-TERMCHK	01414A-I	E-MNMFINDD	014156-I	E-CSSBUF	0141BC-I
E-CSSCLOSE	0141DA-I	E-MSGLOG	0141F8-I	E-PREPRO	01424C-I
E-BLANKBUF	0143C2-I	E-CMDWGB	0143D6-I	E-CMDWGBX	0143D8-I
E-CMDWRITE	0143E0-I	E-CMDERMV	014422-I	E-CMDTYMV	01443C-I
E-XAIDSBRK	0145D4-I	E-CMDRDBLK	014684-I	E-SV1ERTB	014738-I
E-IOEMSG	01478C-I	E-CSLTSK	014ABC-I	E-CSSTSK	014AC0-I
E-TESTPRT	014AC6-I	E-GENBUFF	014AE0-I	E-GENBUF05	014AE5-I
E-GENBUF06	014AE6-I	E-GENBUF07	014AE7-I	E-GENBUF08	014AE8-I
E-GENBUF09	014AE9-I	F-GENBUF10	014AEA-I	E-GENBUF11	014AEB-I
E-GENBUF12	014AEC-I	E-GENBUF13	014AED-I	E-GENBUF14	014AEE-I
E-GENBUF15	014AEF-I	E-GENBUF16	014AF0-I	E-GENBUF17	014AF1-I
E-GENBUF18	014AF2-I	E-GENBUF19	014AF3-I	E-GENBUF20	014AF4-I
E-GENBUF21	014AF5-I	E-GENBUF22	014AF6-I	E-GENBUF23	014AF7-I
E-GENBUF24	014AF8-I	E-GENBUF25	014AF9-I	E-GENBUF26	014AFA-I
E-GENBUF27	014AFB-I	E-GENBUF28	014AFC-I	E-GENBUF29	014AFD-I
E-GENBUF30	014AFE-I	E-GENBUF31	014AFF-I	E-GENBUF32	014B00-I
E-GENBUF33	014B01-I	E-GENBUF34	014B02-I	E-GENBUF35	014B03-I
E-GENBUF36	014B04-I	E-GENBUF37	014B05-I	E-GENBUF38	014B06-I
E-GENBUF39	014B07-I	E-GENBUF40	014B08-I	E-GENBUF41	014B09-I
E-GENBUF42	014B0A-I	E-GENBUF43	014B0B-I	E-GENBUF44	014B0C-I
E-GENBUF45	014B0D-I	E-GENBUF46	014B0E-I	E-GENBUF47	014B0F-I
E-GENBUF48	014B10-I	E-GENBUF49	014B11-I	E-GENBUF50	014B12-I
E-GENBUF51	014B13-I	E-GENBUF52	014B14-I	E-GENBUF53	014B15-I
E-GENBUF54	014B16-I	E-GENBUF55	014B17-I	E-GENBUF56	014B18-I
E-GENBUF57	014B19-I	E-GENBUF58	014B1A-I	E-GENBUF59	014B1B-I
E-GENBUF60	014B1C-I	E-GENBUF61	014B1D-I	E-GENBUF62	014B1E-I
E-GENBUF63	014B1F-I	E-GENBUF64	014B20-I	E-GENBUF65	014B21-I
E-GENBUF66	014B22-I	E-GENBUF67	014B23-I	E-GENBUF68	014B24-I
E-GENBUF69	014B25-I	E-GENBUF70	014B26-I	E-GENBUF71	014B27-I
E-GENBUF72	014B28-I	E-GENBUF73	014B29-I	E-GENBUF74	014B2A-I
E-GENBUF75	014B2B-I	P-ERRC.F01	014B70-I	E-ERRC.F01	014B70-I
E-MERD.TEF	014B84-I	E-MERD.STA	014B84-I	E-MERD.CNF	014B84-I
E-MER.SCHD	014B84-I	E-MER.RSCH	014B84-I	E-MEMERLV	014B84-I
E-MCONFIG	014B84-I	E-FMERRLV	014B84-I	E-ERC.GINI	014B84-I
E-ERC.BLST	014B84-I	E-MER.CNCL	014B88-I	E-ERC.RECD	014B8E-I
E-ERC.PERD	014B98-I	E-ERC.DISP	014BA2-I	E-ERC.LOG	014BAC-I
E-MER.LOG	014BB6-I	E-ERC.MENT	014BB8-I	E-ERC.DVRS	014BB8-I
E-ERC.FMSQ	014BBC-I	E-ERC.BTMR	014BBC-I	E-ERC.BTMA	014BBC-I
E-ERC.DRBL	014BBE-I	E-ERC.IXPR	014BC0-I	E-ERC.DRPR	014BC0-I
E-ERC.TQOV	014BC2-I	E-ERC.SQFL	014BC4-I	E-ERC.SQNL	014BC6-I
E-ERC.SQDR	014BC6-I	E-ERC.MKON	014BC8-I	E-ERC.MKOF	014BCA-I
E-ERC.MNBN	014BCC-I	E-ERC.MFNB	014BCC-I	E-ERC.VOL	014BCE-I
E-ERC.SQDP	014BDO-I	E-ERC.TREN	014BD6-I	E-ERC.TRE2	014BD6-I
E-ERC.PFR	014BD6-I	E-CMDPERFG	014BDC-I	P-EXAC.F01	014BE0-I
E-EXAC.F01	014BE0-I	E-TMCPUOFF	014BF4-I	E-TMCPUON	014BF6-I
E-TCPU.TIM	014BFC-I	F-TCPU.TCB	014C04-I	E-TCPU.TYP	014C08-I
E-HOLDTIME	014C10-I	E-ACUMTIME	014C10-I	E-ACT.BMSG	014C16-I

SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS
E-ACT.SMSG	014C18-I	E-SVC2.25	014C1A-I	E-SVC2.24	014C1A-I
E-SV4.RMAW	014C20-I	E-SV4.RDAC	014C20-I	E-SV4.ENAC	014C20-I
E-ACCTZERO	014C26-I	E-DSPACCT	014C28-I	P-EXIN.F53	014C40-I
E-EXIN.F53	014C40-I	E-IIH	014D00-I	E-MEMFLTRS	014D80-I
E-MEMFAULT	014E10-I	E-ISHRS	014E22-I	E-ISH	014E48-I
E-MMH	0154D8-I	E-SQS2DISP	015E08-I	E-DISP2SQS	015E20-I
E-SYSINIT	015E6A-I	E-REL.MASK	016218-I	E-CTR162	016B0C-I
E-EREGS	016B80-I	E-XREGS	016BC0-I	P-EXIO.F01	016C00-I
E-EXIO.F01	016C00-I	F-SVC1	016C14-I	E-SVC1.0	016C16-I
E-SV1ADER1	016E1A-I	E-COMIOH	016E30-I	E-SVC1WRIT	016E74-I
E-SVC1READ	016E74-I	E-SVC1WFM	016EB2-I	E-SVC1REW	016EB2-I
E-SVC1FSR	016EB2-I	E-SVC1FFM	016EB2-I	E-SVC1DDF	016EB2-I
E-SVC1BSR	016EB2-I	E-SVC1BFM	016EB2-I	E-WAITIO	016EFE-I
E-SVC1WAIT	016F28-I	E-SVC1TEST	016FC4-I	E-SVC1HALT	017020-I
E-H1NCON	017076-I	E-H1EEXIT	017184-I	E-SVC1EXIT	01719C-I
E-SV1FCER	017202-I	E-SVC1NOOP	017220-I	E-SVC1INA	017260-I
E-SVC1IA	017266-I	E-SVC1NIA	01726E-I	E-SVC1NINA	01727C-I
E-DCB25500	017284-I	E-NULLIOH	01731C-I	E-BAREIOH	017360-I
E-MDISKINI	0173A4-I	E-BARETST	0173FE-I	E-BAREWR	017410-I
E-BARERD	017410-I	E-IOSETCC	017630-I	E-DIRDONE	017644-I
E-SQS.EX	017656-I	E-EVRTE	017656-I	E-SQS	01765C-I
E-SQS.TIME	0176BC-I	E-SQS.TSL	0176D0-I	E-SQS.SLV	0176DE-I
E-SQS.MLV	0176F2-I	F-IODONE2	01772C-I	E-IODONE	01772C-I
E-IODCOM	017740-I	E-IODCOM2	017774-I	E-GETIOB	017780-I
E-RELI0B	0177B2-I	E-COMQ	0177C0-I	E-COMFIFO	0177D8-I
E-DISKQ	017858-I	E-SEEKPOS	01785C-I	E-SEEKCHK	017866-I
E-LEAFQ	01786A-I	E-LEAFCON	01789A-I	E-EVQCON	017986-I
E-EVCON	01798C-I	E-EVDIS	017A70-I	E-IODGST	017B5C-I
E-IODGST2	017B9E-I	E-IODTWT	017BA6-I	E-IODTWT2	017BE2-I
E-NSEVREL	017C04-I	E-EVREL	017C04-I	E-COMDIS	017C4C-I
E-EVMOD	017CFC-I	F-TOITAMIO	017D0E-I	P-EXLD.F50	017D20-I
E-EXLD.F50	017D20-I	E-LOAD.SRF	017D34-I	E-LOADING	017D84-I
E-LOADTASK	017E60-I	E-TCBLOOK	018DC4-I	E-TCBLOOK2	018DC6-I
E-SEG.ADD	018DFA-I	E-SEG.RMV	018E58-I	E-PUR.SCAN	018F44-I
E-SEG.SCAN	018F4A-I	E-SEG.DIS	019264-I	E-RELPST	019408-I
E-LOADSEG	01946C-I	E-PSWSAV	019788-I	P-EXMY.F52	0197A0-I
E-EXMY.F52	0197A0-I	E-SVC2.2	0197B4-I	E-SVC2.3	019864-I
E-SVC2.20	0198A0-I	E-SVC2.21	0198AC-I	E-GETTQE	0198E0-I
E-RELTQE	0198FC-I	E-GETFCB	01992C-I	E-RELEFCB	0199B4-I
E-GETZERO	019A24-I	E-GETMEM	019A3C-I	E-RELMEM	019A9C-I
E-GETTCB	019B46-I	E-RELTQB	019B5C-I	E-RELTQB1	019B60-I
E-GETSDE	019B6A-I	E-RELSDE	019B7C-I	E-GETSTSYP	019B84-I
E-GETSYP	019B8C-I	E-RELSYP	019CB2-I	E-ROERMSG	019D78-I
E-ROERTYPE	019D88-I	E-ROERNAME	019D98-I	E-ROERSTYP	019DB0-I
E-ROERMSGE	019DB3-I	E-SEGTYPE	019DB4-I	P-EXSP.F51	019DE0-I
E-EXSP.F51	019DE0-I	E-SVC2	019DF4-I	E-TERM	01A7D6-I
E-TERM1	01A7DC-I	E-CANEOJ	01AB52-I	E-EXECSRCC	01AC6C-I
E-UNPACK	01AC88-I	E-JOURNAL	01ACF0-I	E-TIMEOUT	01ACF4-I

SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS
E-ADCHKF1	01AD46-I	E-ADCHKF	01AD50-I	E-ADCHK	01AD58-I
E-ADCHK1	01AD64-I	E-ADCHK2F1	01AE1E-I	E-ADCHK2F	01AE28-I
E-ADCHK2	01AE30-I	E-ADCHK2F2	01AE3C-I	E-ADCHKNS	01AE4C-I
E-ADCHKNS1	01AE5C-I	E-ADCHK2ET	01AF16-I	E-DE.ADCHK	01AF3C-I
P-EXSV.F52	01AFD0-I	E-EXSV.F52	01AFD0-I	E-SVC3	01AFE4-I
E-SV3.TERM	01AFF4-I	E-COMEOT	01B0E4-I	E-DISPPSW	01B4E8-I
E-SVC9	01B502-I	E-SVC14	01B5AA-I	E-SVC4	01B5CE-I
E-SV4.NEXT	01B714-I	E-SV4.ERR3	01B72E-I	E-SVC5	01B79A-I
E-SV6ERCD	01B92C-I	E-SV6ERTB	01B950-I	E-SVC6	01BA50-I
E-SUBCKRPT	01C218-I	E-SUBRPORT	01C21A-I	E-SUBRPTNS	01C276-I
E-MTMRPTNS	01C280-I	E-SETUTOP	01C5F8-I	E-SETDELAY	01C656-I
E-SVC10	01C974-I	P-EXTI.F01	01CDA0-I	E-EXTI.F01	01CDA0-I
E-SVC2.8	01CDB4-I	E-SVC2.9	01CEAE-I	E-SVC2.10	01CF4A-I
E-SVC2.11	01CF4E-I	E-SVC2.23	01CF64-I	E-GETUREG	01D342-I
E-TICAN	01D528-I	E-TICAN1	01D52C-I	E-TIFXTCHN	01D61C-I
E-PICESR	01D7DE-I	E-TIMESR	01D8E2-I	E-CPU.TIME	01DB7C-I
E-TM.FREQ	01DB84-I	E-TM30DAYS	01DB85-I	E-TM.FEB	01DB87-I
E-ITAMFREQ	01DB9A-I	E-ITM.FREQ	01DB9C-I	E-TOCHON	01DB9E-I
E-TOCHOFF	01DBC2-I	P-EXTM.F52	01DC00-I	E-EXTM.F52	01DC00-I
E-SV9.ATQ1	01DC14-I	E-SV9.ATQ	01DC1A-I	E-SV9.ASQ1	01DC1E-I
E-SV9.ASQ	01DC24-I	E-SV9.TSWN	01DD48-I	E-SV9.STSW	01DD4E-I
E-TMDISP	01DE00-I	E-ROLLPRIO	01DE12-I	E-TMRDISP	01DE14-I
E-TMRD.MAC	01DF12-I	E-TMNSOUT	01E4AC-I	E-TMSTART	01E4D6-I
E-TMSTOPW	01E538-I	E-TMSTOP	01E53E-I	E-TMRSAIN	01E584-I
E-TMRSIN1	01E59C-I	E-TMRSIN	01E59C-I	E-TMRSARS	01E686-I
E-TMRSRSA	01E6A6-I	E-TMRSOUT	01E6F6-I	E-TMRSOTNS	01E704-I
E-TMRSABOUT	01E742-I	E-TMRENW	01E7E4-I	E-TMCHN	01E85C-I
E-TMUCHN	01E8C0-I	P-FLTP.F04	01E920-I	E-FLTP.F04	01E920-I
E-FLTP	01E934-I	E-FLTPDBG	01FE38-I	P-FMCO.F33	01FE40-I
E-FMCO.F33	01FE40-I	E-CNTGIOH	01FE54-I	P-FMIN.F33	020620-I
E-FMIN.F33	020620-I	E-INDXIOH	020634-I	E-INDEXC	020686-I
E-COMNO1	020694-I	E-ISSUEIO	020ED0-I	E-INX.ZBUF	020F4C-I
E-INX.READ	020F7A-I	E-INX.FORL	020FDE-I	E-INX.CINX	021134-I
E-RESET.IN	021156-I	P-FMNB.F33	0213B0-I	E-FMNB.F33	0213B0-I
E-NBUFFIOH	0213C4-I	E-NBUFF00	021408-I	E-NBF.CINX	0218D2-I
E-NBF.POSN	021956-I	E-NBF.FORL	021A14-I	E-RESET.NB	021B46-I
P-FMS7.F34	021CE0-I	E-FMS7.F34	021CE0-I	E-SVC7	021CF4-I
E-SV7.CMD	021E9C-I	E-OPN.BDSK	022148-I	E-OPEN.DEV	0221A0-I
E-OPD.NRJE	022268-I	E-RESET.RW	023C04-I	E-RESET	023C04-I
E-WAITRS	023F4C-I	E-TESTRS	023F9C-I	E-ERR.NB	0243AE-I
E-ERR.02	0243B2-I	E-ERR.OB	0243DA-I	P-FMUT.F33	0247D0-I
E-FMUT.F33	0247D0-I	E-APCHECK	0247E4-I	E-APCHECK1	0248C4-I
E-APCHECK2	0248D0-I	E-DATE.DIR	024970-I	E-GETSECTR	02499C-I
E-PUTB	024D48-I	E-RELEB	024DC6-I	E-FDCHECK	024EB4-I
E-DEVCHECK	024EE6-I	E-ACCHECK	024F74-I	E-LUCHECK	024FF0-I
E-DIRLOOK	02500A-I	E-MAKEXFNM	0252E0-I	E-GETD	025334-I
E-PUTD	0253A8-I	E-DMTLOOK	0253C4-I	E-VMTLOOK	0253F4-I
E-ALLOD	0253FE-I	E-SET.LRCL	02569C-I	E-MOVE	0256CC-I

SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS
E-MOVE1	0258D8-I	E-MOVENUll	0258EE-I	P-INTC.F01	025930-I
E-INTC.F01	025930-I	E-SV4ITRAP	025944-I	E-SV4ITERM	025944-I
E-SV4IROLL	025944-I	E-SV4IREMV	025944-I	E-SV4IPUT	025944-I
E-SV4IPROC	025944-I	E-SV4IGET	025944-I	E-SV4ICRTE	025944-I
E-SV4ICRSP	025944-I	E-SV4ICONT	025944-I	E-STRTINTC	025950-I
E-INTERCPT	025950-I	E-ENDINTC	025950-I	E-DORSINTC	025950-I
E-XTCBLOOK	025956-I	E-XDMTLOOK	025956-I	E-IPAUSCHK	025958-I
P-MCHK.F02	025960-I	E-MCHK.F02	025960-I	E-MEMONOFF	025974-I
E-MEMCHK2	025CBA-I	E-MEMCHKER	025D90-I	E-MKOFMEM	026272-I
E-INITMTST	0264A2-I	P-DUMP.F01	026770-I	E-DUMP.F01	026770-I
E-PANIC	026784-I	E-MSG	026E0E-I	E-GETC	026E3E-I
E-TOPCSRCH	026F06-I	E-DMP.SOPT	027068-I	E-CON.GET	02707A-I
E-CON.PUT	02707B-I	E-DUMP.CON	02707C-I	E-DUMP.CNW	02707E-I
P-ITFM.M00	027370-I	E-ITFM.M00	027370-I	E-SVC15	027382-I
E-CANITAM	027388-I	E-IT.OPEN	02738E-I	E-IT.DELET	027394-I
E-IT.ALLOC	027394-I	E-IT.ORJE	0273A0-I	E-IT.FETCH	0273A0-I
E-IT.CLOSE	0273A0-I	E-IT.CHKPT	0273A0-I	E-IT.CAP	0273A0-I
E-IT.RSLU	0273AC-I	E-GETCPH	0273AE-I	E-ITEMTLF	0273C0-I
E-ITAMTIMC	0273C0-I	E-ITAMCNT	0273C0-I	E-EMT.FREQ	0273C0-I
P-UBOT.F01	0273D0-I	E-UBOT.F01	0273D0-I	E-UBOT.0	0273E4-I
E-OS.PATCH	0273E4-I	E-UBOT	027504-I	E-OS.END	027504-I

-- IMAGE LINKED AT 13:58:55 ON MARCH 27, 1983 --

SYMBOL	-- NODE	-- ADDRESS	SYMBOL	-- NODE	-- ADDRESS
E-\$BUILD	.ROOT	011F28-I	E-\$CLEAR	.ROOT	011F22-I
E-\$COPY	.ROOT	01214E-I	E-\$ELSE	.ROOT	0120AA-I
E-\$ENDC	.ROOT	0120DA-I	E-\$EXIT	.ROOT	011ED4-I
E-\$IFE	.ROOT	011FF2-I	E-\$IFG	.ROOT	011FDA-I
E-\$IFL	.ROOT	011FE6-I	E-\$IFNE	.ROOT	012016-I
E-\$IFNG	.ROOT	011FFE-I	E-\$IFNL	.ROOT	01200A-I
E-\$IFNULL	.ROOT	01203A-I	E-\$IFNULL	.ROOT	012022-I
E-\$IFNX	.ROOT	01205A-I	E-\$IFX	.ROOT	012050-I
E-\$INITFLP	.ROOT	008F00-I	E-\$INITMHD	.ROOT	008018-I
E-\$INITMMD	.ROOT	008578-I	E-\$JOB	.ROOT	011E6C-I
E-\$NOCOPY	.ROOT	01215A-I	E-\$SKIP	.ROOT	011EAA-I
E-\$TERMJOB	.ROOT	011F62-I	E-\$STRANS	.ROOT	011F9C-I
E-\$WRITE	.ROOT	0120FE-I	E-.MTM	.ROOT	011B8C-I
E-.SPL	.ROOT	011B78-I	E-ACCHECK	.ROOT	024F74-I
E-ACCTZERO	.ROOT	014C26-I	E-ACT.BMSG	.ROOT	014C16-I
E-ACT.SMSG	.ROOT	014C18-I	E-ACUMTIME	.ROOT	014C10-I
E-ADCHK	.ROOT	01AD58-I	E-ADCHK1	.ROOT	01AD64-I
E-ADCHK2	.ROOT	01AE30-I	E-ADCHK2ET	.ROOT	01AF16-I
E-ADCHK2F	.ROOT	01AE28-I	E-ADCHK2F1	.ROOT	01AE1E-I
E-ADCHK2F2	.ROOT	01AE3C-I	E-ADCHKF	.ROOT	01AD50-I
E-ADCHKF1	.ROOT	01AD46-I	E-ADCHKNS	.ROOT	01AE4C-I
E-ADCHKNS1	.ROOT	01AE5C-I	E-ALLOCATE	.ROOT	00F800-I
E-ALLOD	.ROOT	0253FE-I	E-APCHECK	.ROOT	0247E4-I
E-APCHECK1	.ROOT	0248C4-I	E-APCHECK2	.ROOT	0248D0-I
E-ASGNERR	.ROOT	011718-I	E-ASSIGN	.ROOT	011542-I
E-ATTN.P	.ROOT	0133ED-I	E-BACREC	.ROOT	00E3C4-I
E-BAREIOH	.ROOT	017360-I	E-BARERD	.ROOT	017410-I
E-BARETST	.ROOT	0173FE-I	E-BAREWR	.ROOT	017410-I
E-BFILE	.ROOT	00E3BE-I	E-BFM	.ROOT	00963C-I
E-BIAS	.ROOT	010630-I	E-BIO.OCIV	.ROOT	002162-P
E-BIO.PPTO	.ROOT	002160-P	E-BIOC.ID	.ROOT	00764C-I
E-BIOC.IOH	.ROOT	007CBC-I	E-BIT4900	.ROOT	0071CC-I
E-BIT5000	.ROOT	0072A8-I	E-BIT5100	.ROOT	007250-I
E-BIT5200	.ROOT	00732C-I	E-BIT5300	.ROOT	007384-I
E-BIT5400	.ROOT	0073DC-I	E-BIT5500	.ROOT	007098-I
E-BIT5501	.ROOT	0070F0-I	E-BLANKBUF	.ROOT	0143C2-I
E-BOTCHECK	.ROOT	009CE8-I	E-BSR	.ROOT	00952A-I
E-BSRPRIM	.ROOT	009562-I	E-BUILD	.ROOT	011E08-I
E-BUILDDSP	.ROOT	011E32-I	E-BUILDFLG	.ROOT	012510-I
E-C000	.ROOT	007434-I	E-C100	.ROOT	007460-I
E-C200	.ROOT	00748C-I	E-C300	.ROOT	0074B8-I
E-C400	.ROOT	0074E4-I	E-CANCEL	.ROOT	0105F2-I
E-CANEOJ	.ROOT	01AB52-I	E-CANITAM	.ROOT	027388-I
E-CARDHARD	.ROOT	00ABB2-I	E-CB600	.ROOT	007510-I
E-CBUFLV	.ROOT	006FBC-I	E-CCB11300	.ROOT	000A9C-P
E-CCB3900	.ROOT	000A00-P	E-CCB3901	.ROOT	000A40-P
E-CCB4900	.ROOT	000B7C-P	E-CCB5100	.ROOT	000B98-P
E-CCB5200	.ROOT	000BB4-P	E-CCB5500	.ROOT	000AB8-P



-- IMAGE LINKED AT 13:58:55 ON MARCH 27, 1983 --

SYMBOL	-- NODE	-- ADDRESS	SYMBOL	-- NODE	-- ADDRESS
E-CCB5501	.ROOT	000AD4-P	E-CCB6400	.ROOT	000AF0-P
E-CCB6500	.ROOT	000B0C-P	E-CCB6800	.ROOT	000B28-P
E-CCB6900	.ROOT	000B44-P	E-CCB7000	.ROOT	000B60-P
E-CCB9600	.ROOT	000A80-P	E-CCBDSC0	.ROOT	000B7C-P
E-CCBDSC1	.ROOT	000B98-P	E-CCBDSC3	.ROOT	000BB4-P
E-CCBFLP1	.ROOT	000AB8-P	E-CCBFLP2	.ROOT	000AD4-P
E-CCBMAG1	.ROOT	000AF0-P	E-CCX3900	.ROOT	000A1C-P
E-CCX3901	.ROOT	000A5C-P	E-CDESV3	.ROOT	00C346-I
E-CDEXIN	.ROOT	00C3B2-I	E-CDEXMY	.ROOT	00C374-I
E-CDEXTM	.ROOT	00C332-I	E-CDFUTB	.ROOT	00C364-I
E-CDSV27	.ROOT	00C2FE-I	E-CDVR.F01	.ROOT	00C090-I
P-CDVR.F01	.ROOT	00C090-I	E-CFB00	.ROOT	00753C-I
E-CHCKDDPS	.ROOT	009E82-I	E-CHECK.ID	.ROOT	00DE1E-I
E-CHECKCSL	.ROOT	0140FE-I	E-CHECKDU	.ROOT	009B44-I
E-CHECKID	.ROOT	00DE22-I	E-CIOINCPT	.ROOT	00C16E-I
E-CMCLOSE	.ROOT	01135E-I	E-CMDASGN1	.ROOT	011872-I
E-CMDB.F33	.ROOT	00C620-I	P-CMDB.F33	.ROOT	00C620-I
E-CMDBGT	.ROOT	012504-I	E-CMDBGTRC	.ROOT	01250E-I
E-CMDBIAS	.ROOT	012508-I	E-CMDBUFFS	.ROOT	003B20-I
E-CMDCLOSE	.ROOT	011890-I	E-CMDELETE	.ROOT	00F6DA-I
E-CMDEEMPTY	.ROOT	0135CC-I	E-CMDERMV	.ROOT	014422-I
E-CMDERREX	.ROOT	013FFC-I	E-CMDERROR	.ROOT	013FEE-I
E-CMDFLP	.ROOT	008FBA-I	E-CMDM62E	.ROOT	00A7C4-I
E-CMDMAGS	.ROOT	0093A4-I	E-CMDNEXT	.ROOT	013A58-I
E-CMDP.G0	.ROOT	013768-I	E-CMDP.Q	.ROOT	013524-I
E-CMDP.TCB	.ROOT	013348-I	E-CMDP.UDL	.ROOT	0134A4-I
E-CMDPERFG	.ROOT	014BDC-I	E-CMDPSYSG	.ROOT	013F52-I
E-CMDPTCB	.ROOT	003800-I	E-CMDRDBLK	.ROOT	014684-I
E-CMDSCAN	.ROOT	009C48-I	E-CMDTYMV	.ROOT	01443C-I
E-CMDWGB	.ROOT	0143D6-I	E-CMDWGBX	.ROOT	0143D8-I
E-CMDWRITE	.ROOT	0143E0-I	E-CMEX.F33	.ROOT	0104B0-I
P-CMEX.F33	.ROOT	0104B0-I	E-CMIR.F01	.ROOT	012E30-I
P-CMIR.F01	.ROOT	012B30-I	E-CMON.F01	.ROOT	012B60-I
P-CMON.F01	.ROOT	012B60-I	E-CMRENAME	.ROOT	011426-I
E-CMSP.F33	.ROOT	013490-I	P-CMSP.F33	.ROOT	013490-I
E-CMSP.UDL	.ROOT	012B74-I	E-CNTGIOH	.ROOT	01FE54-I
E-CNVNUM	.ROOT	00BB58-I	E-COMDIS	.ROOT	017C4C-I
E-COMEOT	.ROOT	01B0E4-I	E-COMFIFO	.ROOT	0177D8-I
E-COMIOH	.ROOT	016E30-I	E-COMMACK	.ROOT	014128-I
E-COMMACK1	.ROOT	014128-I	E-COMMAND	.ROOT	012C10-I
E-COMNO1	.ROOT	020694-I	E-COMQ	.ROOT	0177C0-I
E-CON.GET	.ROOT	02707A-I	E-CON.PUT	.ROOT	02707B-I
E-CONDVR	.ROOT	00C400-I	E-CONTINUE	.ROOT	0104C4-I
E-CPU.TIME	.ROOT	01DB7C-I	E-CRASH	.ROOT	009DF0-I
E-CSKIPA	.ROOT	013B3E-I	E-CSLTSK	.ROOT	014ABC-I
E-CSSBUF	.ROOT	0141BC-I	E-CSSCLOSE	.ROOT	0141DA-I
E-CSSLEVEL	.ROOT	012512-I	E-CSSLIST	.ROOT	012514-I
E-CSSSKIP	.ROOT	012516-I	E-CSSTSK	.ROOT	014AC0-I

-- IMAGE LINKED AT 13:58:55 ON MARCH 27, 1983 --

SYMBOL	-- NODE	-- ADDRESS	SYMBOL	-- NODE	-- ADDRESS
E-CSSTST	.ROOT	013BC4-I	E-CTR162	.ROOT	016B0C-I
E-DATE.DIR	.ROOT	024970-I	E-DBUGNOPR	.ROOT	00E392-I
E-DCB.CON	.ROOT	0040C0-I	E-DCB.CR	.ROOT	0044F0-I
E-DCB.CRT	.ROOT	0042D8-I	E-DCB.DSCO	.ROOT	0056A8-I
E-DCB.DSC1	.ROOT	005A44-I	E-DCB.DSC2	.ROOT	005DE0-I
E-DCB.DSC3	.ROOT	00617C-I	E-DCB.DSC4	.ROOT	006518-I
E-DCB.DSC5	.ROOT	006990-I	E-DCB.FLP1	.ROOT	0046B0-I
E-DCB.FLP2	.ROOT	004A4C-I	E-DCB.MAG1	.ROOT	004DE8-I
E-DCB.MAG2	.ROOT	004FA8-I	E-DCB.MAG3	.ROOT	005168-I
E-DCB.MAG4	.ROOT	005328-I	E-DCB.MAG5	.ROOT	0054E8-I
E-DCB.PR	.ROOT	00458C-I	E-DCB11300	.ROOT	00458C-I
E-DCB25500	.ROOT	017284-I	E-DCB3900	.ROOT	0040C0-I
E-DCB3901	.ROOT	0042D8-I	E-DCB4900	.ROOT	0056A8-I
E-DCB5000	.ROOT	005DE0-I	E-DCB5100	.ROOT	005A44-I
E-DCB5200	.ROOT	00617C-I	E-DCB5300	.ROOT	006518-I
E-DCB5400	.ROOT	006990-I	E-DCB5500	.ROOT	0046B0-I
E-DCB5501	.ROOT	004A4C-I	E-DCB6400	.ROOT	004DE8-I
E-DCB6500	.ROOT	004FA8-I	E-DCB6800	.ROOT	005168-I
E-DCB6900	.ROOT	005328-I	E-DCB7000	.ROOT	0054E8-I
E-DCB9600	.ROOT	0044F0-I	E-DCBCMD	.ROOT	00C544-I
P-DCBS	.ROOT	000A00-P	P-DCBS	.ROOT	0040C0-I
E-DE.ADCHK	.ROOT	01AF3C-I	E-DEVCHECK	.ROOT	024EE6-I
E-DIR4900	.ROOT	0071F8-I	E-DIR5000	.ROOT	0072D4-I
E-DIR5100	.ROOT	00727C-I	E-DIR5200	.ROOT	007358-I
E-DIR5300	.ROOT	0073B0-I	E-DIR5400	.ROOT	007408-I
E-DIR5500	.ROOT	0070C4-I	E-DIR5501	.ROOT	00711C-I
E-DIRDONE	.ROOT	017644-I	E-DIREXIT	.ROOT	00B826-I
E-DIREXT	.ROOT	0102E4-I	E-DIRFN	.ROOT	0102DC-I
E-DIRLOOK	.ROOT	02500A-I	E-DIRREGS	.ROOT	009BF0-I
E-DISKQ	.ROOT	017858-I	E-DISP2SQS	.ROOT	015E20-I
E-DISPFD	.ROOT	00DAF0-I	E-DISPIND1	.ROOT	0102D0-I
E-DISPIND2	.ROOT	0102D2-I	E-DISPLAY	.ROOT	00D2FA-I
E-DISPPSW	.ROOT	01B4E8-I	E-DMLV	.ROOT	006EB4-I
E-DMP.SOPT	.ROOT	027068-I	E-DMT	.ROOT	004020-I
E-DMT.CON	.ROOT	004028-I	E-DMT.CR	.ROOT	004038-I
E-DMT.CRT	.ROOT	004030-I	E-DMT.DSCO	.ROOT	004080-I
E-DMT.DSC1	.ROOT	004088-I	E-DMT.DSC2	.ROOT	004090-I
E-DMT.DSC3	.ROOT	004098-I	E-DMT.DSC4	.ROOT	0040A0-I
E-DMT.DSC5	.ROOT	0040A8-I	E-DMT.FLP1	.ROOT	004048-I
E-DMT.FLP2	.ROOT	004050-I	E-DMT.MAG1	.ROOT	004058-I
E-DMT.MAG2	.ROOT	004060-I	E-DMT.MAG3	.ROOT	004068-I
E-DMT.MAG4	.ROOT	004070-I	E-DMT.MAG5	.ROOT	004078-I
E-DMT.PR	.ROOT	004040-I	P-DMTINIT	.ROOT	004020-I
E-DMTLOOK	.ROOT	0253C4-I	E-DMTNUL	.ROOT	004020-I
E-DORSINTC	.ROOT	025950-I	E-DOWNLD	.ROOT	00BCC0-I
E-DSPACCT	.ROOT	014C28-I	E-DSPFHD	.ROOT	00C634-I
E-DUMP.CNW	.ROOT	02707E-I	E-DUMP.CON	.ROOT	02707C-I
P-DUMP.F01	.ROOT	026770-I	E-DUMP.F01	.ROOT	026770-I

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SYMBOL	-- NODE	-- ADDRESS	SYMBOL	-- NODE	-- ADDRESS
E-EMT.FREQ	.ROOT	0273C0-I	E-ENDINTC	.ROOT	025950-I
E-ENDSCAN	.ROOT	00B774-I	E-ENDSCAN1	.ROOT	00B7AE-I
E-EOFTEST	.ROOT	009C68-I	E-EOTTESTF	.ROOT	009CBE-I
E-ERASE	.ROOT	0099A2-I	E-ERASE1	.ROOT	009A90-I
E-ERC.BLST	.ROOT	014B84-I	E-ERC.BTMA	.ROOT	014BBC-I
E-ERC.BTMR	.ROOT	014BBC-I	E-ERC.DISP	.ROOT	014BA2-I
E-ERC.DRBL	.ROOT	014BBE-I	E-ERC.DRPR	.ROOT	014BC0-I
E-ERC.DVRS	.ROOT	014PB8-I	E-ERC.FMSQ	.ROOT	014BBC-I
E-ERC.GINI	.ROOT	014B84-I	E-ERC.IXPR	.ROOT	014BC0-I
E-ERC.LOG	.ROOT	014BAC-I	E-ERC.MENT	.ROOT	014BB8-I
E-ERC.MFNB	.ROOT	014PCC-I	E-ERC.MKOF	.ROOT	014BCA-I
E-ERC.MKON	.ROOT	014BC8-I	E-ERC.MNNB	.ROOT	014BCC-I
E-ERC.PERD	.ROOT	014B98-I	E-ERC.PFR	.ROOT	014BD6-I
E-ERC.RECD	.ROOT	014B8E-I	E-ERC.SQDP	.ROOT	014BD0-I
E-ERC.SQDR	.ROOT	014PC6-I	E-ERC.SQFL	.ROOT	014BC4-I
E-ERC.SQNL	.ROOT	014BC6-I	E-ERC.TQOV	.ROOT	014BC2-I
E-ERC.TRE2	.ROOT	014BD6-I	E-ERC.TREN	.ROOT	014BD6-I
E-ERC.VOL	.ROOT	014PCF-I	E-EREGS	.ROOT	016B80-I
E-ERR.02	.ROOT	0243B2-I	E-ERR.0B	.ROOT	0243DA-I
E-ERR.ASGN	.ROOT	014088-I	E-ERR.COM	.ROOT	01407C-I
E-ERR.COM1	.ROOT	014080-I	E-ERR.NB	.ROOT	0243AE-I
E-ERRC.F01	.ROOT	014B70-I	P-ERRC.F01	.ROOT	014E70-I
E-ERRDU	.ROOT	009F02-I	E-ERROR	.ROOT	009F70-I
E-ERRORC	.ROOT	012AE8-I	E-ERRRECOV	.ROOT	009F0C-I
E-ERRUNREC	.ROOT	009F16-I	E-ESR1MMD	.ROOT	008A60-I
E-ESR2MMD	.ROOT	008AA4-I	E-ESR3MMD	.ROOT	008AC8-I
E-ESR4MMD	.ROOT	008DD0-I	E-ESR5MMD	.ROOT	008E34-I
E-ESRERS	.ROOT	009AD2-I	E-ESRTOUT	.ROOT	009B34-I
E-EVCON	.ROOT	01798C-I	E-EVDIS	.ROOT	017A70-I
E-EVMOD	.ROOT	017CFC-I	P-EVNGEN	.ROOT	000BD0-P
P-EVNGEN	.ROOT	006E40-I	E-EVQCON	.ROOT	017986-I
E-EVREL	.ROOT	017C04-I	E-EVRTE	.ROOT	017656-I
E-EVT	.ROOT	006E88-I	E-EXAC.F01	.ROOT	014BE0-I
P-EXAC.F01	.ROOT	014BE0-I	E-EXECMSG	.ROOT	00C1CC-I
E-EXECSRCC	.ROOT	01AC6C-I	E-EXIN.F53	.ROOT	014C40-I
P-EXIN.F53	.ROOT	002FF0-P	P-EXIN.F53	.ROOT	014C40-I
P-EXIO.F01	.ROOT	016C00-I	E-EXIO.F01	.ROOT	016C00-I
P-EXLD.F50	.ROOT	017D20-I	E-EXLD.F50	.ROOT	017D20-I
E-EXMY.F52	.ROOT	0197A0-I	P-EXMY.F52	.ROOT	0197A0-I
P-EXSP.F51	.ROOT	019DE0-I	E-EXSP.F51	.ROOT	019DE0-I
P-EXSV.F52	.ROOT	01AFD0-I	E-EXSV.F52	.ROOT	01AFD0-I
P-EXTI.F01	.ROOT	0032B0-P	P-EXTI.F01	.ROOT	01CDA0-I
E-EXTI.F01	.ROOT	01CDA0-I	E-EXTM.F52	.ROOT	01DC00-I
P-EXTM.F52	.ROOT	01DC00-I	E-FDCHECK	.ROOT	024EB4-I
E-FDERROR	.ROOT	011750-I	E-FFILE	.ROOT	00E3B2-I
E-FFM	.ROOT	0096DC-I	E-FIRECMD	.ROOT	009C24-I
E-FIREIO	.ROOT	009BCA-I	E-FLTP	.ROOT	01E934-I
E-FLTP.F04	.ROOT	01E920-I	P-FLTP.F04	.ROOT	01E920-I

-- IMAGE LINKED AT 13:58:55 ON MARCH 27, 1983 --

SYMBOL	-- NODE	-- ADDRESS	SYMBOL	-- NODE	-- ADDRESS
E-FLTPDBG	.ROOT	01FE38-I	E-FLTPFLAG	.ROOT	013A2C-I
P-FMCO.F33	.ROOT	01FE40-I	E-FMCO.F33	.ROOT	01FE40-I
E-FMERRLV	.ROOT	014B84-I	E-FMIN.F33	.ROOT	020620-I
P-FMIN.F33	.ROOT	020620-I	P-FMNB.F33	.ROOT	0213B0-I
E-FMNB.F33	.ROOT	0213B0-I	E-FMS7.F34	.ROOT	021CE0-I
P-FMS7.F34	.ROOT	021CE0-I	P-FMUT.F33	.ROOT	0247D0-I
E-FMUT.F33	.ROOT	0247D0-I	E-FORMERR	.ROOT	013F9A-I
E-FORREC	.ROOT	00E3B8-I	E-FSR	.ROOT	009462-I
E-FSRPRIM	.ROOT	009496-I	E-GENBUF05	.ROOT	014AE5-I
E-GENBUF06	.ROOT	014AE6-I	E-GENBUF07	.ROOT	014AE7-I
E-GENBUF08	.ROOT	014AE8-I	E-GENBUF09	.ROOT	014AE9-I
E-GENBUF10	.ROOT	014AEA-I	E-GENBUF11	.ROOT	014AEB-I
E-GENBUF12	.ROOT	014AEC-I	E-GENBUF13	.ROOT	014AED-I
E-GENBUF14	.ROOT	014AEE-I	E-GENBUF15	.ROOT	014AEF-I
E-GENBUF16	.ROOT	014AF0-I	E-GENBUF17	.ROOT	014AF1-I
E-GENBUF18	.ROOT	014AF2-I	E-GENBUF19	.ROOT	014AF3-I
E-GENBUF20	.ROOT	014AF4-I	E-GENBUF21	.ROOT	014AF5-I
E-GENBUF22	.ROOT	014AF6-I	E-GENBUF23	.ROOT	014AF7-I
E-GENBUF24	.ROOT	014AF8-I	E-GENBUF25	.ROOT	014AF9-I
E-GENBUF26	.ROOT	014AFA-I	E-GENBUF27	.ROOT	014AFB-I
E-GENBUF28	.ROOT	014AFC-I	E-GENBUF29	.ROOT	014AFD-I
E-GENBUF30	.ROOT	014AFE-I	E-GENBUF31	.ROOT	014AFF-I
E-GENBUF32	.ROOT	014B00-I	E-GENBUF33	.ROOT	014B01-I
E-GENBUF34	.ROOT	014B02-I	E-GENBUF35	.ROOT	014B03-I
E-GENBUF36	.ROOT	014B04-I	E-GENBUF37	.ROOT	014B05-I
E-GENBUF38	.ROOT	014B06-I	E-GENBUF39	.ROOT	014B07-I
E-GENBUF40	.ROOT	014B08-I	E-GENBUF41	.ROOT	014B09-I
E-GENBUF42	.ROOT	014B0A-I	E-GENBUF43	.ROOT	014B0B-I
E-GENBUF44	.ROOT	014B0C-I	E-GENBUF45	.ROOT	014B0D-I
E-GENBUF46	.ROOT	014B0E-I	E-GENBUF47	.ROOT	014B0F-I
E-GENBUF48	.ROOT	014B10-I	E-GENBUF49	.ROOT	014B11-I
E-GENBUF50	.ROOT	014B12-I	E-GENBUF51	.ROOT	014B13-I
E-GENBUF52	.ROOT	014B14-I	E-GENBUF53	.ROOT	014B15-I
E-GENBUF54	.ROOT	014B16-I	E-GENBUF55	.ROOT	014B17-I
E-GENBUF56	.ROOT	014B18-I	E-GENBUF57	.ROOT	014B19-I
E-GENBUF58	.ROOT	014B1A-I	E-GENBUF59	.ROOT	014B1B-I
E-GENBUF60	.ROOT	014B1C-I	E-GENBUF61	.ROOT	014B1D-I
E-GENBUF62	.ROOT	014B1E-I	E-GENBUF63	.ROOT	014B1F-I
E-GENBUF64	.ROOT	014B20-I	E-GENBUF65	.ROOT	014B21-I
E-GENBUF66	.ROOT	014B22-I	E-GENBUF67	.ROOT	014B23-I
E-GENBUF68	.ROOT	014B24-I	E-GENBUF69	.ROOT	014B25-I
E-GENBUF70	.ROOT	014B26-I	E-GENBUF71	.ROOT	014B27-I
E-GENBUF72	.ROOT	014B28-I	E-GENBUF73	.ROOT	014B29-I
E-GENBUF74	.ROOT	014B2A-I	E-GENBUF75	.ROOT	014B2B-I
E-GENBUFF	.ROOT	014AEO-I	E-GENXLATE	.ROOT	00BE84-I
E-GETBUFCH	.ROOT	00B99C-I	E-GETBUFF	.ROOT	00B834-I
E-GETC	.ROOT	026E3E-I	E-GETCPH	.ROOT	0273AE-I
E-GETD	.ROOT	025334-I	E-GETFCB	.ROOT	01992C-I

-- IMAGE LINKED AT 13:58:55 ON MARCH 27, 1983 --

SYMBOL	-- NODE	-- ADDRESS	SYMBOL	-- NODE	-- ADDRESS
E-GETFRAC	.ROOT	01215E-I	E-GETIOB	.ROOT	017780-I
E-GETMEM	.ROOT	019A3C-I	E-GETSDE	.ROOT	019B6A-I
E-GETSECTR	.ROOT	02499C-I	E-GETSTSYP	.ROOT	019B84-I
E-GETSYP	.ROOT	019B8C-I	E-GETTCB	.ROOT	019B46-I
E-GETTQE	.ROOT	0198E0-I	E-GETUREG	.ROOT	01D342-I
E-GETZERO	.ROOT	019A24-I	E-GOPULL	.ROOT	009DF6-I
E-GOWAIT	.ROOT	009EA6-I	E-H1EEXIT	.ROOT	017184-I
E-H1NCON	.ROOT	017076-I	E-HOLDTIME	.ROOT	014C10-I
E-IFLVL	.ROOT	012518-I	E-IIH	.ROOT	014D00-I
E-III	.ROOT	0032BC-P	E-INDEXC	.ROOT	020686-I
E-INDXIOH	.ROOT	020634-I	E-INITBIOC	.ROOT	007630-I
P-INITBIOC	.ROOT	000E80-P	P-INITBIOC	.ROOT	007630-I
E-INITCARD	.ROOT	00AB00-I	P-INITCARD	.ROOT	002CC0-P
P-INITCARD	.ROOT	00AB00-I	E-INITCMD	.ROOT	007628-I
E-INITFLPY	.ROOT	008EE0-I	P-INITFLPY	.ROOT	0023A0-P
P-INITFLPY	.ROOT	008EE0-I	E-INITLPTR	.ROOT	00AD60-I
P-INITLPTR	.ROOT	002FF0-P	P-INITLPTR	.ROOT	00AD60-I
E-INITM62E	.ROOT	00A070-I	P-INITM62E	.ROOT	002880-P
P-INITM62E	.ROOT	00A070-I	E-INITMAGS	.ROOT	009010-I
P-INITMAGS	.ROOT	0025D0-P	P-INITMAGS	.ROOT	009010-I
E-INITMHD	.ROOT	008000-I	P-INITMHD	.ROOT	002170-P
P-INITMHD	.ROOT	008000-I	E-INITMMD	.ROOT	008560-I
P-INITMMD	.ROOT	002260-P	P-INITMMD	.ROOT	008560-I
E-INITMTST	.ROOT	0264A2-I	E-INITRA29	.ROOT	00AC60-I
P-INITRA29	.ROOT	00AC60-I	E-INITSUBS	.ROOT	00B6E0-I
P-INITSUBS	.ROOT	002FC0-P	P-INITSUBS	.ROOT	00B6E0-I
E-INITVFCS	.ROOT	00B158-I	P-INITVFCS	.ROOT	00B140-I
P-INTC.F01	.ROOT	025930-I	E-INTC.F01	.ROOT	025930-I
E-INTERCPT	.ROOT	025950-I	E-INTX.CINX	.ROOT	021134-I
E-INTX.FORL	.ROOT	020FDE-I	E-INTX.READ	.ROOT	020F7A-I
E-INTX.ZBUF	.ROOT	020F4C-I	E-IODCOM	.ROOT	017740-I
E-IODCOM2	.ROOT	017774-I	E-IODGST	.ROOT	017B5C-I
E-IODGST2	.ROOT	017B9E-I	E-IODONE	.ROOT	01772C-I
E-IODONE2	.ROOT	01772C-I	E-IODTWT	.ROOT	017BA6-I
E-IODTWT2	.ROOT	017BE2-I	E-IOEMSG	.ROOT	01478C-I
E-IOERR	.ROOT	013FE6-I	E-IOH6250	.ROOT	009F94-I
E-IOHCDVR	.ROOT	00C5DC-I	E-IOHLP	.ROOT	00B0EC-I
E-IOSETCC	.ROOT	017630-I	E-IPAUSCHK	.ROOT	025958-I
E-IRBUFFER	.ROOT	012B4A-I	E-IRDRINIT	.ROOT	012B58-I
E-IREADER	.ROOT	012B54-I	E-ISH	.ROOT	014E48-I
E-ISHRS	.ROOT	014E22-I	E-ISPTAB	.ROOT	0000D0-P
E-ISR1MMD	.ROOT	002260-P	E-ISR2MMD	.ROOT	002280-P
E-ISR3MMD	.ROOT	002310-P	E-ISR4MMD	.ROOT	002348-P
E-ISRCOM	.ROOT	0027AE-P	E-ISRERS	.ROOT	002782-P
E-ISREXIT	.ROOT	0027D8-P	E-ISRLEAVE	.ROOT	00B704-I
E-ISRLFC	.ROOT	0032B6-P	E-ISRLPTR	.ROOT	002EF0-P
E-ISRM62E	.ROOT	002880-P	E-ISRMAG1	.ROOT	0025D0-P
E-ISRPIC	.ROOT	0032B0-P	E-ISRTOUT	.ROOT	00B6F8-I

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SYMBOL	-- NODE	-- ADDRESS	SYMBOL	-- NODE	-- ADDRESS
E-ISSUEIO	.ROOT	020ED0-I	E-IT.ALLOC	.ROOT	027394-I
E-IT.CAP	.ROOT	0273A0-I	E-IT.CHKPT	.ROOT	0273A0-I
E-IT.CLOSE	.ROOT	0273A0-I	E-IT.DELET	.ROOT	027394-I
E-IT.FETCH	.ROOT	0273A0-I	E-IT.OPEN	.ROOT	02738E-I
E-IT.ORJE	.ROOT	0273A0-I	E-IT.RSLU	.ROOT	0273AC-I
E-ITAMCNT	.ROOT	0273C0-I	E-ITAMFREQ	.ROOT	01DB9A-I
E-ITAMTIMC	.ROOT	0273C0-I	E-ITEMTLF	.ROOT	0273C0-I
E-ITFM.M00	.ROOT	027370-I	P-ITFM.M00	.ROOT	027370-I
E-ITM.FREQ	.ROOT	01DB9C-I	E-IVTBL	.ROOT	007594-I
E-JOBFLAG	.ROOT	01251C-I	E-JOBIFLVL	.ROOT	01251A-I
E-JOBSKIP	.ROOT	01251E-I	E-JOURNAL	.ROOT	01ACF0-I
E-LEAFCON	.ROOT	01789A-I	E-LEAFQ	.ROOT	01786A-I
E-LF.FIRST	.ROOT	006E88-I	E-LF.LAST	.ROOT	007408-I
E-LF11300	.ROOT	007040-I	E-LF3900	.ROOT	006E88-I
E-LF3901	.ROOT	006FE8-I	E-LF4900	.ROOT	0071A0-I
E-LF5100	.ROOT	007224-I	E-LF5200	.ROOT	007300-I
E-LF5500	.ROOT	00706C-I	E-LF6400	.ROOT	007148-I
E-LF6500	.ROOT	007174-I	E-LF9600	.ROOT	007014-I
E-LFCON	.ROOT	006E88-I	E-LFCR	.ROOT	007014-I
E-LFCRT	.ROOT	006FE8-I	E-LFDSCO	.ROOT	0071A0-I
E-LFDSC1	.ROOT	007224-I	E-LFDSC3	.ROOT	007300-I
E-LFFLP1	.ROOT	00706C-I	E-LFMAG1	.ROOT	007148-I
E-LFMAG2	.ROOT	007174-I	E-LFPR	.ROOT	007040-I
E-LFSET	.ROOT	00BDD8-I	E-LGMBUFF	.ROOT	003FAC-I
E-LIKSTACK	.ROOT	009108-I	E-LOAD.SRF	.ROOT	017D34-I
E-LOADER	.ROOT	012522-I	E-LOADING	.ROOT	017D84-I
E-LOADLV	.ROOT	006F90-I	E-LOADSEG	.ROOT	01946C-I
E-LOADTASK	.ROOT	017F60-I	E-LOGCKCNT	.ROOT	013404-I
E-LOGCKPTI	.ROOT	013402-I	E-LOGFLAG	.ROOT	013400-I
E-LUCHECK	.ROOT	024FF0-I	E-LUERROR	.ROOT	011566-I
E-LUTST	.ROOT	00D5BA-I	E-MAKEXFNM	.ROOT	0252E0-I
E-MARK	.ROOT	01189A-I	E-MAXLNGTH	.ROOT	00B7FE-I
P-MCHK.F02	.ROOT	025960-I	E-MCHK.F02	.ROOT	025960-I
E-MCONFIG	.ROOT	014B84-I	E-MDISKINI	.ROOT	0173A4-I
E-MEMCHK2	.ROOT	025CBA-I	E-MEMCHKER	.ROOT	025D90-I
E-MEMERLV	.ROOT	014B84-I	E-MEMERR	.ROOT	010AEA-I
E-MEMFAULT	.ROOT	014E10-I	E-MEMFLTRS	.ROOT	014D80-I
E-MEMONOFF	.ROOT	025974-I	E-MEMORY	.ROOT	0109B4-I
E-MER.CNCL	.ROOT	014B88-I	E-MER.LOG	.ROOT	014BB6-I
E-MER.RSCH	.ROOT	014B84-I	E-MER.SCHD	.ROOT	014B84-I
E-MERD.CNF	.ROOT	014B84-I	E-MERD.STA	.ROOT	014B84-I
E-MERD.TEF	.ROOT	014B84-I	E-MKOFMEM	.ROOT	026272-I
E-MMASREG	.ROOT	000BD0-P	E-MMDIOH	.ROOT	008E70-I
E-MMH	.ROOT	0154D8-I	E-MNMFINN	.ROOT	014156-I
E-MOFFBLK	.ROOT	00E624-I	E-MONBLK	.ROOT	00E786-I
E-MOVE	.ROOT	0256CC-I	E-MOVE1	.ROOT	0258D8-I
E-MOVENULL	.ROOT	0258EE-I	E-MSG	.ROOT	026F0E-I
E-MSGLOG	.ROOT	0141F8-I	E-MTMRPTNS	.ROOT	01C280-I

-- IMAGE LINKED AT 13:58:55 ON MARCH 27, 1983 --

SYMBOL	-- NODE	-- ADDRESS	SYMBOL	-- NODE	-- ADDRESS
E-MTPRCVRB	.ROOT	009F42-I	E-MTPTOUT	.ROOT	009F36-I
E-MTPUNCVR	.ROOT	009F2A-I	E-NBF.CINX	.ROOT	0218D2-I
E-NBF.FORL	.ROOT	021A14-I	E-NBF.POSN	.ROOT	021956-I
E-NBUFFOO	.ROOT	021408-I	E-NBUFFIOH	.ROOT	0213C4-I
E-NOPRERR	.ROOT	0106B8-I	E-NSEVREL	.ROOT	017C04-I
E-NULLIOH	.ROOT	01731C-I	E-OPD.NRJE	.ROOT	022268-I
E-OPEN.DEV	.ROOT	0221A0-I	E-OPN.BDSK	.ROOT	022148-I
E-OPTIONS	.ROOT	010P04-I	E-OS.END	.ROOT	027504-I
E-OS.PATCH	.ROOT	0273E4-I	E-PANIC	.ROOT	026784-I
E-PARMERR	.ROOT	013FA2-I	E-PAUSE	.ROOT	01130C-I
E-PICADDR	.ROOT	013A12-I	E-PICESR	.ROOT	01D7DE-I
E-PICLV	.ROOT	006F38-I	E-PREPRO	.ROOT	01424C-I
E-PROMODE	.ROOT	012520-I	E-PSWSAV	.ROOT	019788-I
E-PTRSTACK	.ROOT	003AF4-I	E-PUR.SCAN	.ROOT	018F44-I
E-PUTB	.ROOT	024D48-I	E-PURD	.ROOT	0253A8-I
E-PWL	.ROOT	006F0C-I	E-RDSELCH	.ROOT	00B750-I
E-READ	.ROOT	01074E-I	E-READCMD	.ROOT	010852-I
E-REGBIAS	.ROOT	000DD8-P	E-REGS	.ROOT	009C14-I
E-REL.MASK	.ROOT	016218-I	E-RELEB	.ROOT	024DC6-I
E-RELEFCB	.ROOT	0199B4-I	E-RELIOB	.ROOT	0177B2-I
E-RELMEM	.ROOT	019A9C-I	E-RELPST	.ROOT	019408-I
E-RELSDE	.ROOT	019B7C-I	E-RELSYP	.ROOT	019CB2-I
E-RELTCB	.ROOT	019B5C-I	E-RELTCB1	.ROOT	019B60-I
E-RELTQE	.ROOT	0198FC-I	E-REMOVE	.ROOT	0129B8-I
E-REPROTEC	.ROOT	0114EA-I	E-RESET	.ROOT	023C04-I
E-RESET.IN	.ROOT	021156-I	E-RESET.NB	.ROOT	021B46-I
E-RESET.RW	.ROOT	023C04-I	E-RESETAB	.ROOT	00BB06-I
E-RESETBTS	.ROOT	00BB4C-I	E-REWIND	.ROOT	00E3CA-I
E-REWINDT	.ROOT	009430-I	E-ROERMSG	.ROOT	019D78-I
E-ROERMSG	.ROOT	019DB3-I	E-ROERNAME	.ROOT	019D98-I
E-ROERSTYP	.ROOT	019DB0-I	E-ROERTYPE	.ROOT	019D88-I
E-ROLLPRIO	.ROOT	01DE12-I	E-RSTVT	.ROOT	00BBD8-I
E-RSTVTALL	.ROOT	00BBD0-I	E-RVOLUME	.ROOT	00F284-I
E-SCANNER	.ROOT	01413C-I	E-SCTH		000000-A
E-SCTT		000000-A	E-SECTORBF	.ROOT	0103A8-I
E-SEEKCHK	.ROOT	017866-I	E-SEEKPOS	.ROOT	01785C-I
E-SEG.ADD	.ROOT	018DFA-I	E-SEG.DIS	.ROOT	019264-I
E-SEG.RMV	.ROOT	018E58-I	E-SEG.SCAN	.ROOT	018F4A-I
E-SEGTYPE	.ROOT	019DB4-I	E-SEND	.ROOT	011B40-I
E-SEQERR	.ROOT	010948-I	E-SET	.ROOT	010BCE-I
E-SET.LRCL	.ROOT	02569C-I	E-SETBUFF	.ROOT	00B840-I
E-SETDELAY	.ROOT	01C656-I	E-SEHTAB	.ROOT	00B9A6-I
E-SETISP	.ROOT	00B80E-I	E-SETISPS	.ROOT	00B820-I
E-SETLU	.ROOT	0140D2-I	E-SETTOUT	.ROOT	0027EA-P
E-SETUTOP	.ROOT	01C5F8-I	E-SETVTAB	.ROOT	00BA0C-I
E-SFOOO	.ROOT	007568-I	E-SLICELV	.ROOT	006F64-I
E-SPOLFILE	.ROOT	00C796-I	E-SPSET	.ROOT	00BE30-I
E-SPT		000060-A	E-SPT.60	.ROOT	003316-I

-- IMAGE LINKED AT 13:58:55 ON MARCH 27, 1983 --

SYMBOL	-- NODE	-- ADDRESS	SYMBOL	-- NODE	-- ADDRESS
E-SPT.ADCK	.ROOT	003354-I	E-SPT.ADDM	.ROOT	00342C-I
E-SPT.ADK1	.ROOT	003358-I	E-SPT.AFSV	.ROOT	0033AC-I
E-SPT.CHBK	.ROOT	0032EC-I	E-SPT.CLSS	.ROOT	00334C-I
E-SPT.CPID	.ROOT	00343C-I	E-SPT.CPIE	.ROOT	003440-I
E-SPT.CPU	.ROOT	00333E-I	E-SPT.CRSH	.ROOT	0032D6-I
E-SPT.CSBF	.ROOT	0032E8-I	E-SPT.CSLV	.ROOT	0032E4-I
E-SPT.CTCB	.ROOT	0033EC-I	E-SPT.CTOP	.ROOT	0032F0-I
E-SPT.CTSP	.ROOT	0032E2-I	E-SPT.DATE	.ROOT	00336C-I
E-SPT.DAY	.ROOT	00336E-I	E-SPT.DFOW	.ROOT	003404-I
E-SPT.DMT	.ROOT	003318-I	E-SPT.DTHD	.ROOT	003378-I
E-SPT.EDMA	.ROOT	0033E0-I	E-SPT.EFOW	.ROOT	003400-I
E-SPT.EMHD	.ROOT	0033E4-I	E-SPT.EMTL	.ROOT	0033E8-I
E-SPT.ERBL	.ROOT	003464-I	E-SPT.ESOW	.ROOT	0033F8-I
E-SPT.FLST	.ROOT	0033C8-I	E-SPT.FLV	.ROOT	0032D8-I
E-SPT.FREQ	.ROOT	003338-I	E-SPT.FSYP	.ROOT	0033CC-I
E-SPT.HLDA	.ROOT	00341C-I	E-SPT.HLDB	.ROOT	003420-I
E-SPT.INIT	.ROOT	0032D0-I	E-SPT.IPID	.ROOT	003462-I
E-SPT.IQHD	.ROOT	003380-I	E-SPT.ISPT	.ROOT	0032EE-I
E-SPT.IVT	.ROOT	00330C-I	E-SPT.JRNL	.ROOT	003334-I
E-SPT.LFC	.ROOT	00333C-I	E-SPT.LLV	.ROOT	0032DC-I
E-SPT.MCOW	.ROOT	0033FC-I	E-SPT.MISS	.ROOT	003444-I
E-SPT.MLBL	.ROOT	0032E0-I	E-SPT.MNTH	.ROOT	00336C-I
E-SPT.MTM	.ROOT	003314-I	E-SPT.MTOP	.ROOT	003300-I
E-SPT.NODE	.ROOT	003448-I	E-SPT.NTCB	.ROOT	003315-I
E-SPT.OFFM	.ROOT	003430-I	E-SPT.OSID	.ROOT	003304-I
E-SPT.OSUP	.ROOT	003394-I	E-SPT.PAGE	.ROOT	003424-I
E-SPT.PAGM	.ROOT	003434-I	E-SPT.PANC	.ROOT	003398-I
E-SPT.PIC	.ROOT	00333A-I	E-SPT.PID	.ROOT	003460-I
E-SPT.PMEM	.ROOT	0032FC-I	E-SPT.PSDD	.ROOT	003450-I
E-SPT.PSDT	.ROOT	003454-I	E-SPT.PSV	.ROOT	00339C-I
E-SPT.QH	.ROOT	003458-I	E-SPT.RDCB	.ROOT	0033D8-I
E-SPT.RLIO	.ROOT	003410-I	E-SPT.RSOF	.ROOT	00340C-I
E-SPT.RSON	.ROOT	003408-I	E-SPT.RSOW	.ROOT	0033F4-I
E-SPT.RSV	.ROOT	0033A4-I	E-SPT.RTCB	.ROOT	0033D4-I
E-SPT.RTLS	.ROOT	003384-I	E-SPT.RVOL	.ROOT	003328-I
E-SPT.SCL	.ROOT	0033C4-I	E-SPT.SCLP	.ROOT	003428-I
E-SPT.SCTH	.ROOT	00338C-I	E-SPT.SCTT	.ROOT	003390-I
E-SPT.SEGM	.ROOT	003438-I	E-SPT.SNOD	.ROOT	003330-I
E-SPT.SOPT	.ROOT	003340-I	E-SPT.SPCT	.ROOT	0033DC-I
E-SPT.SPVL	.ROOT	003324-I	E-SPT.SSTE	.ROOT	003350-I
E-SPT.SSTS	.ROOT	003352-I	E-SPT.STCB	.ROOT	003480-I
E-SPT.SVOL	.ROOT	003320-I	E-SPT.TCMS	.ROOT	003388-I
E-SPT.TID	.ROOT	00345C-I	E-SPT.TIME	.ROOT	003374-I
E-SPT.TQHD	.ROOT	00337C-I	E-SPT.TSL	.ROOT	003372-I
E-SPT.TSV	.ROOT	0033A8-I	E-SPT.TTAB	.ROOT	003310-I
E-SPT.TVOL	.ROOT	00332C-I	E-SPT.UBOT	.ROOT	0032F8-I
E-SPT.UTCB	.ROOT	012500-I	E-SPT.UTOP	.ROOT	0032F4-I
E-SPT.UTOW	.ROOT	0033F0-I	E-SPT.VALU	.ROOT	003418-I



-- IMAGE LINKED AT 13:58:55 ON MARCH 27, 1983 --

SYMBOL	-- NODE	-- ADDRESS	SYMBOL	-- NODE	-- ADDRESS
E-SPT.VERN	.ROOT	003344-I	E-SPT.VMT	.ROOT	00331C-I
E-SPT.YEAR	.ROOT	003370-I	P-SPTINIT	.ROOT	000000-P
P-SPTINIT	.ROOT	0032D0-I	E-SPTTAG	.ROOT	003508-I
E-SQ	.ROOT	0075BC-I	E-SQS	.ROOT	01765C-I
E-SQS.EX	.ROOT	017656-I	E-SQS.MLV	.ROOT	0176F2-I
E-SQS.SLV	.ROOT	0176DE-I	E-SQS.TIME	.ROOT	0176BC-I
E-SQS.TSL	.ROOT	0176D0-I	E-SQS2DISP	.ROOT	015E08-I
E-START	.ROOT	01056C-I	E-STATUS	.ROOT	009B5C-I
E-STRTINTC	.ROOT	025950-I	E-SUBCKRPT	.ROOT	01C218-I
E-SUBRPORT	.ROOT	01C21A-I	E-SUBRPTNS	.ROOT	01C276-I
E-SV1ADER1	.ROOT	016E1A-I	E-SV1ERTB	.ROOT	014738-I
E-SV1FCER	.ROOT	017202-I	E-SV3.TERM	.ROOT	01AFF4-I
E-SV4.ENAC	.ROOT	014C20-I	E-SV4.ERR3	.ROOT	01B72E-I
E-SV4.NEXT	.ROOT	01B714-I	E-SV4.RDAC	.ROOT	014C20-I
E-SV4.RMAW	.ROOT	014C20-I	E-SV4ICONT	.ROOT	025944-I
E-SV4ICRSP	.ROOT	025944-I	E-SV4ICRTE	.ROOT	025944-I
E-SV4IGET	.ROOT	025944-I	E-SV4IPROC	.ROOT	025944-I
E-SV4IPUT	.ROOT	025944-I	E-SV4IREMV	.ROOT	025944-I
E-SV4IROLL	.ROOT	025944-I	E-SV4ITERM	.ROOT	025944-I
E-SV4ITRAP	.ROOT	025944-I	E-SV6ERCD	.ROOT	01B92C-I
E-SV6ERTB	.ROOT	01B950-I	E-SV7.CMD	.ROOT	021E9C-I
E-SV9.ASQ	.ROOT	01DC24-I	E-SV9.ASQ1	.ROOT	01DC1E-I
E-SV9.ATQ	.ROOT	01DC1A-I	E-SV9.ATQ1	.ROOT	01DC14-I
E-SV9.STSW	.ROOT	01DD4E-I	E-SV9.TSWN	.ROOT	01DD48-I
F-SVC1	.ROOT	016C14-I	E-SVC1.0	.ROOT	016C16-I
E-SVC10	.ROOT	01C974-I	E-SVC14	.ROOT	01B5AA-I
E-SVC15	.ROOT	027382-I	E-SVC1BFM	.ROOT	016EB2-I
E-SVC1BSR	.ROOT	016EB2-I	E-SVC1DDF	.ROOT	016EB2-I
E-SVC1EXIT	.ROOT	01719C-I	E-SVC1FFM	.ROOT	016EB2-I
E-SVC1FSR	.ROOT	016EB2-I	E-SVC1HALT	.ROOT	017020-I
E-SVC1IA	.ROOT	017266-I	E-SVC1INA	.ROOT	017260-I
E-SVC1NIA	.ROOT	01726E-I	E-SVC1NINA	.ROOT	01727C-I
E-SVC1NOOP	.ROOT	017220-I	E-SVC1READ	.ROOT	016E74-I
E-SVC1REW	.ROOT	016EB2-I	E-SVC1TEST	.ROOT	016FC4-I
E-SVC1WAIT	.ROOT	016F28-I	E-SVC1WFM	.ROOT	016EB2-I
E-SVC1WRIT	.ROOT	016E74-I	E-SVC2	.ROOT	019DF4-I
E-SVC2.10	.ROOT	01CF4A-I	E-SVC2.11	.ROOT	01CF4E-I
E-SVC2.14	.ROOT	012B44-I	E-SVC2.2	.ROOT	0197B4-I
E-SVC2.20	.ROOT	0198A0-I	E-SVC2.21	.ROOT	0198AC-I
E-SVC2.23	.ROOT	01CF64-I	E-SVC2.24	.ROOT	014C1A-I
E-SVC2.25	.ROOT	014C1A-I	E-SVC2.3	.ROOT	019864-I
E-SVC2.7	.ROOT	00C0A4-I	E-SVC2.8	.ROOT	01CDB4-I
E-SVC2.9	.ROOT	01CEAE-I	E-SVC3	.ROOT	01AFE4-I
E-SVC4	.ROOT	01B5CE-I	E-SVC5	.ROOT	01B79A-I
E-SVC6	.ROOT	01BA50-I	E-SVC7	.ROOT	021CF4-I
E-SVC7PBLK	.ROOT	00DF6C-I	E-SVC9	.ROOT	01B502-I
E-SYSINIT	.ROOT	015E6A-I	E-TABSCAN	.ROOT	00B972-I
E-TASK	.ROOT	010EC4-I	E-TASKERR	.ROOT	01051C-I

-- IMAGE LINKED AT 13:58:55 ON MARCH 27, 1983 --

SYMBOL	-- NODE	-- ADDRESS	SYMBOL	-- NODE	-- ADDRESS
E-TCBLOOK	.ROOT	018DC4-I	E-TCBLOOK2	.ROOT	018DC6-I
E-TCBTAB	.ROOT	00347C-I	E-TCOM	.ROOT	012A90-I
E-TCPU.TCB	.ROOT	014C04-I	E-TCPU.TIM	.ROOT	014BFC-I
E-TCPU.TYP	.ROOT	014C08-I	E-TEMPFILE	.ROOT	00C636-I
E-TERM	.ROOT	01A7D6-I	E-TERM1	.ROOT	01A7DC-I
E-TERMBIOC	.ROOT	007B24-I	E-TERMCHK	.ROOT	01414A-I
E-TERMFLP	.ROOT	008FC0-I	E-TERMLPTR	.ROOT	00B00E-I
E-TERMM62E	.ROOT	00A1D2-I	E-TERMMAGS	.ROOT	00918C-I
E-TERMMHD	.ROOT	008200-I	E-TERMMMMD	.ROOT	008A60-I
E-TERMNCRD	.ROOT	00AC34-I	E-TESTPRT	.ROOT	014AC6-I
E-TESTRDY	.ROOT	009CD4-I	E-TESTRS	.ROOT	023F9C-I
E-TESTVFC	.ROOT	00B84A-I	E-TICAN	.ROOT	01D528-I
E-TICAN1	.ROOT	01D52C-I	E-TIFXTCHN	.ROOT	01D61C-I
E-TIMELV	.ROOT	006EE0-I	E-TIMEOUT	.ROOT	01ACF4-I
E-TIMERR	.ROOT	0140B4-I	E-TIMESR	.ROOT	01D8E2-I
E-TM.FEB	.ROOT	01DB87-I	E-TM.FREQ	.ROOT	01DB84-I
E-TM30DAYS	.ROOT	01DB85-I	E-TMCHN	.ROOT	01E85C-I
E-TMCPUOFF	.ROOT	014BF4-I	E-TMCPUON	.ROOT	014BF6-I
E-TMDISP	.ROOT	01DF00-I	E-TMNSOUT	.ROOT	01E4AC-I
E-TMRD.MAC	.ROOT	01DF12-I	E-TMRDISP	.ROOT	01DE14-I
E-TMREMW	.ROOT	01E7E4-I	E-TMRSAIN	.ROOT	01E584-I
E-TMRSABOUT	.ROOT	01E742-I	E-TMRSARS	.ROOT	01E686-I
E-TMRSIN	.ROOT	01E59C-I	E-TMRSIN1	.ROOT	01E59C-I
E-TMRSOTNS	.ROOT	01E704-I	E-TMRSOUT	.ROOT	01E6F6-I
E-TMRSRSA	.ROOT	01E6A6-I	E-TMSTART	.ROOT	01E4D6-I
E-TMSTOP	.ROOT	01E53E-I	E-TMSTOPW	.ROOT	01E538-I
E-TMUCHN	.ROOT	01E8C0-I	E-TOCHOFF	.ROOT	01DBC2-I
E-TOCHON	.ROOT	01DB9F-I	E-TOFBUF	.ROOT	00BDD4-I
E-TOFLFS	.ROOT	00BDD7-I	E-TOITAMIO	.ROOT	017D0E-I
E-TOPCSRCH	.ROOT	026F06-I	E-UBOT	.ROOT	027504-I
E-UBOT.0	.ROOT	0273E4-I	E-UBOT.F01	.ROOT	0273D0-I
P-UBOT.F01	.ROOT	0273D0-I	E-UNPACK	.ROOT	01AC88-I
E-VFC.FFB	.ROOT	00B6D8-I	E-VFC.LFB	.ROOT	00B688-I
E-VFC.SPB	.ROOT	00B604-I	E-VFC.VTB	.ROOT	00B6DC-I
E-VFCDIR	.ROOT	00B1A6-I	E-VFCIGNOR	.ROOT	00B590-I
E-VFCFLPIS	.ROOT	00B198-I	E-VFCFLPND	.ROOT	00B18A-I
E-VFCNEXTA	.ROOT	00B418-I	E-VFCTLT	.ROOT	00B854-I
E-VFUTLT	.ROOT	00B920-I	E-VFUTLTCH	.ROOT	00B988-I
E-VMT	.ROOT	006E40-I	E-VMT.DSCO	.ROOT	006E54-I
E-VMT.DSC1	.ROOT	006F5C-I	E-VMT.DSC2	.ROOT	006E64-I
E-VMT.DSC3	.ROOT	006E6C-I	E-VMT.DSC4	.ROOT	006E74-I
E-VMT.DSC5	.ROOT	006E7C-I	E-VMT.FLP1	.ROOT	006E44-I
E-VMT.FLP2	.ROOT	006E4C-I	E-VMTLOOK	.ROOT	0253F4-I
E-VOLUME	.ROOT	00F460-I	E-VTBUF	.ROOT	00BE80-I
E-WAITIO	.ROOT	016EFE-I	E-WAITRS	.ROOT	023F4C-I
E-WFILE	.ROOT	00E3AC-I	E-WFM	.ROOT	00977A-I
E-WRITE	.ROOT	0106B2-I	E-WRITEM	.ROOT	009226-I
E-WRTSELRD	.ROOT	00B70A-I	E-WRTSELWT	.ROOT	00B732-I

-- IMAGE LINKED AT 13:58:55 ON MARCH 27, 1983 --

SYMBOL	-- NODE	-- ADDRESS	SYMBOL	-- NODE	-- ADDRESS
E-XAIDSBRK	.ROOT	0145D4-I	E-XALLOCAT	.ROOT	00F75E-I
E-XDELETE	.ROOT	00F6D6-I	E-XDMTLOOK	.ROOT	025956-I
E-XLTBIOC	.ROOT	007EEC-I	E-XLTBIOC2	.ROOT	007F6C-I
E-XLTPECRT	.ROOT	007F2C-I	E-XREGS	.ROOT	016BC0-I
E-XTCBLOOK	.ROOT	025956-I			

PERKIN-ELMER SYSGEN/32 03-356 R00-01  
COPY

MCALL DCBI,CCBI,CONVNUM,EVNGEN  
MCALL MMDGEN,MTPI

ENDCOPY

VERSION OS32MTS3

CPU 3240

MEMORY 1024

DSYS 50

MEMCHECK

DEVADS 3

FLOAT S,S

CLOCK 60,6C,6D

BACKGROUND 16,50

VOLUME MT6A

TEMP MT6A

DIRECTORY

DISCBLOCK 32

CSS 8

CMDLEN 100

LOGLEN 100

DEVICES

CON: ,10,39,XDCOD=X2A0D,CONS

CRT: ,12,39,XDCOD=X2A0D

CR: , 4,96

PR: ,62,113

FLP1: ,C1,55,SPINDLE=0

FLP2: ,C1,55,SPINDLE=1

MAG1: ,85,64,SELCH=F0,CONTR=0

MAG2: ,C5,65,SELCH=F0,CONTR=1

MAG3: ,85,68,SELCH=F0,CONTR=2

MAG4: ,85,69,SELCH=F0,CONTR=3

MAG5: ,85,70,SELCH=F0,CONTR=4

DSC0: ,C8,49,SELCH=F0,CONTR=B6

DSC1: ,C6,51,SELCH=F0,CONTR=B6

DSC2: ,C7,50,SELCH=F0,CONTR=B6

DSC3: ,FC,52,SELCH=F0,CONTR=FB

DSC4: ,FC,53,SELCH=F0,CONTR=FB

DSC5: ,FC,54,SELCH=F0,CONTR=FB

DSC6: ,FC,59,SELCH=F0,CONTR=FB

DSC7: ,FC,60,SELCH=F0,CONTR=FB

DSC8: ,FC,61,SELCH=F0,CONTR=FB

DSC9: ,FC,62,SELCH=F0,CONTR=FB

DSCA: ,FC,44,SELCH=F0,CONTR=FB

ENDD

ENDC

\*OS32MTS3 SYSTEM 03-120F03

\*CPU = 3210, 3230, 3240 OR 3250

\*MEMORY = 1024-KB

\*SYSTEM SPACE = 50-KB

\*MEMORY DIAGNOSTICS INCLUDED

\*MAX OF 1023 DEVICES IN SYSTEM

\*FLOATING POINT SOFTWARE SUPPORT

\*60-HZ, LFC=6C, PIC=6D

\*BACKGROUND TASK'S PRIORITIES

\*DEFAULT SYSTEM VOLUME

\*DEFAULT TEMPORARY VOLUME

\*CORE DIRECTORY INCLUDED

\*DISCFILE BLOCKING FACTOR=32 SECT.

\*CSS NESTING DEPTH

\*COMMAND BUFFER LENGTH = 100 BYTES

\*LOG BUFFER LENGTH = 100 BYTES

\*CONSOLE - PE 550/PE 1100

\*PE 550/PE 1100

\*CARD READER

\*300-LPM LINE PRINTER

\*FLOPPY DISC-1

\*FLOPPY DISC-2

\* 800-BPI TAPE

\*1600-BPI TAPE

\*6250-BPI TAPE HPTD-125 CONTROLLER

\*6250-BPI TAPE STC CONTROLLER

\*6250-BPI TAPE TELEX CONTROLLER

\*2.5-MB DISC (REMOVEABLE)

\* 5-MB DISC (REMOVEABLE)

\* 5-MB DISC (FIXED)

\* 40-MB DISC (REMOVEABLE)

\* 67-MB DISC (REMOVEABLE)

\*256-MB DISC (REMOVEABLE)

\* 16-MB DISC (REMOVEABLE)

\* 16-MB DISC (FIXED)

\* 48-MB DISC (FIXED)

\* 80-MB DISC (FIXED)

\*300-MB DISC (FIXED)

FILE NAME: M67A:OS32MTS3.OS/140 -- PACKAGE NAME: OS32MTS3.OS -- RECORDS: 665

UBOT: 0 -- UTOP: 29170 -- CTOP: 291FE -- SIZE: 164.50 KB

NODE MAP:

LEVEL	NAME	LENGTH	PURE	IMPURE	COMMON	TABLES
0	.ROOT	29170	32D0	25EAO	0	0
	(TOTALS)	29170	32D0	25EAO	0	0

VIRTUAL ADDRESS MAP:

FROM	TO	SEGMENT NAME	SIZE	ACCESS
000000	0291FF	.ROOT	164.50 KB	RWE

-- IMAGE LINKED AT 14:05:27 ON MARCH 27, 1983 --

NODE: .ROOT - LEVEL: 0 - ADDRESS: 0 - SIZE: 29170 - PARENT:

SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS
E-SCTT	000000-A	E-SCTH	000000-A	E-SPT	000060-A
P-SPTINIT	000000-P	E-ISPTAB	0000D0-P	P-DCBS	000A00-P
E-CCB3900	000A00-P	E-CCX3900	000A1C-P	E-CCB3901	000A40-P
E-CCX3901	000A5C-P	E-CCB9600	000A80-P	E-CCB11300	000A9C-P
E-CCBFLP1	000AB8-P	E-CCB5500	000AB8-P	E-CCBFLP2	000AD4-P
E-CCB5501	000AD4-P	E-CCBMAG1	000AF0-P	E-CCB6400	000AF0-P
E-CCB6500	000B0C-P	E-CCB6800	000B28-P	E-CCB6900	000B44-P
E-CCB7000	000B60-P	E-CCBDSCO	000B7C-P	E-CCB4900	000B7C-P
E-CCBDSC1	000B98-P	E-CCB5100	000B98-P	E-CCBDSC3	000BB4-P
E-CCB5200	000BB4-P	P-EVNGEN	000BD0-P	E-MMASREG	000BD0-P
E-REGBIAS	000DD8-P	P-INITBIOC	000E80-P	E-BIO.PPTO	002160-P
E-BIO.OCIV	002162-P	P-INITMHD	002170-P	P-INITMMD	002260-P
E-ISR1MMD	002260-P	E-ISR2MMD	002280-P	E-ISR3MMD	002310-P
E-ISR4MMD	002348-P	P-INITFLPY	0023A0-P	P-INITMAGS	0025D0-P
E-ISMAG1	0025D0-P	E-ISRERS	002782-P	E-ISRCOM	0027AE-P
E-ISREXIT	0027D8-P	E-SETTOUT	0027EA-P	P-INITM62E	002880-P
E-ISRM62E	002880-P	P-INITCARD	002CC0-P	P-INITLPTR	002EF0-P
E-ISRLPTR	002EF0-P	P-INITSUBS	002FC0-P	P-EXIN.F53	002FF0-P
P-EXTI.F01	0032B0-P	E-ISRPIC	0032B0-P	E-ISRLFC	0032B6-P
E-III	0032BC-P	P-SPTINIT	0032D0-I	E-SPT.INIT	0032D0-I
E-SPT.CRSH	0032D6-I	E-SPT.FLV	0032D8-I	E-SPT.LLV	0032DC-I
E-SPT.MLBL	0032E0-I	E-SPT.CTSP	0032E2-I	E-SPT.CSLV	0032E4-I
E-SPT.CSBF	0032E8-I	E-SPT.CHBK	0032EC-I	E-SPT.ISPT	0032EE-I
E-SPT.CTOP	0032F0-I	E-SPT.UTOP	0032F4-I	E-SPT.UBOT	0032F8-I
E-SPT.PMEM	0032FC-I	E-SPT.MTOP	003300-I	E-SPT.OSID	003304-I
E-SPT.IVT	00330C-I	E-SPT.TTAB	003310-I	E-SPT.MTM	003314-I
E-SPT.NTCB	003315-I	E-SPT.60	003316-I	E-SPT.DMT	003318-I
E-SPT.VMT	00331C-I	E-SPT.SVOL	003320-I	E-SPT.SPVL	003324-I
E-SPT.RVOL	003328-I	E-SPT.TVOL	00332C-I	E-SPT.SNOD	003330-I
E-SPT.JRNL	003334-I	E-SPT.FREQ	003338-I	E-SPT.PIC	00333A-I
E-SPT.LFC	00333C-I	E-SPT.CPU	00333E-I	E-SPT.SOPT	003340-I
E-SPT.VERN	003344-I	E-SPT.CLSS	00334C-I	E-SPT.SSTE	003350-I
E-SPT.SSTS	003352-I	E-SPT.ADCK	003354-I	E-SPT.ADK1	003358-I
E-SPT.MNTH	00336C-I	E-SPT.DATE	00336C-I	E-SPT.DAY	00336E-I
E-SPT.YEAR	003370-I	E-SPT.TSL	003372-I	E-SPT.TIME	003374-I
E-SPT.DTHD	003378-I	E-SPT.TQHD	00337C-I	E-SPT.IQHD	003380-I
E-SPT.RTLS	003384-I	E-SPT.TCMS	003388-I	E-SPT.SCTH	00338C-I
E-SPT.SCTT	003390-I	E-SPT.OSUP	003394-I	E-SPT.PANC	003398-I
E-SPT.PSV	00339C-I	E-SPT.RSV	0033A4-I	E-SPT.TSV	0033A8-I
E-SPT.AFSV	0033AC-I	E-SPT.SCL	0033C4-I	E-SPT.FLST	0033C8-I
E-SPT.FSYP	0033CC-I	E-SPT.RTCB	0033D4-I	E-SPT.RDCB	0033D8-I
E-SPT.SPCT	0033DC-I	E-SPT.EDMA	0033E0-I	E-SPT.EMHD	0033E4-I
E-SPT.EMTL	0033E8-I	E-SPT.CTCB	0033EC-I	E-SPT.UTOW	0033F0-I
E-SPT.RSOW	0033F4-I	E-SPT.ESOW	0033F8-I	E-SPT.MCOW	0033FC-I
E-SPT.EFOW	003400-I	E-SPT.DFOW	003404-I	E-SPT.RSON	003408-I
E-SPT.RSOF	00340C-I	E-SPT.RLIO	003410-I	E-SPT.VALU	003418-I

SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS
E-SPT.HLDA	00341C-I	E-SPT.HLDB	003420-I	E-SPT.PAGE	003424-I
E-SPT.SCLP	003428-I	E-SPT.ADDM	00342C-I	E-SPT.OFFM	003430-I
E-SPT.PAGM	003434-I	E-SPT.SEGM	003438-I	E-SPT.CPID	00343C-I
E-SPT.CPIE	003440-I	E-SPT.MISS	003444-I	E-SPT.NODE	003448-I
E-SPT.PSDD	003450-I	E-SPT.PSDT	003454-I	E-SPT.QH	003458-I
E-SPT.TID	00345C-I	E-SPT.PID	003460-I	E-SPT.IPID	003462-I
E-SPT.ERBL	003464-I	E-TCBTAB	00347C-I	E-SPT.STCB	003480-I
E-SPTTAG	003508-I	E-CMDPTCB	003800-I	E-PTRSTACK	003AF4-I
E-CMDBUFFS	003B20-I	E-LGMBUFF	003FAC-I	P-DMTINIT	004020-I
E-DMTNULL	004020-I	E-DMT	004020-I	E-DMT.CON	004028-I
E-DMT.CRT	004030-I	F-DMT.CR	004038-I	E-DMT.PR	004040-I
E-DMT.FLP1	004048-I	E-DMT.FLP2	004050-I	E-DMT.MAG1	004058-I
E-DMT.MAG2	004060-I	E-DMT.MAG3	004068-I	E-DMT.MAG4	004070-I
E-DMT.MAG5	004078-I	E-DMT.DSC0	004080-I	E-DMT.DSC1	004088-I
E-DMT.DSC2	004090-I	E-DMT.DSC3	004098-I	E-DMT.DSC4	0040A0-I
E-DMT.DSC5	0040A8-I	E-DMT.DSC6	0040B0-I	E-DMT.DSC7	0040B8-I
E-DMT.DSC8	0040C0-I	E-DMT.DSC9	0040C8-I	E-DMT.DSCA	0040D0-I
P-DCBS	0040E0-I	E-DCB3900	0040E0-I	E-DCB.CON	0040E0-I
E-DCB3901	0042F8-I	E-DCB.CRT	0042F8-I	E-DCB9600	004510-I
E-DCB.CR	004510-I	E-DCB11300	0045AC-I	E-DCB.PR	0045AC-I
E-DCB5500	0046D0-I	E-DCB.FLP1	0046D0-I	E-DCB5501	004A6C-I
E-DCB.FLP2	004A6C-I	E-DCB6400	004E08-I	E-DCB.MAG1	004E08-I
E-DCB6500	004FC8-I	E-DCB.MAG2	004FC8-I	E-DCB6800	005188-I
E-DCB.MAG3	005188-I	E-DCB6900	005348-I	E-DCB.MAG4	005348-I
E-DCB7000	005508-I	E-DCB.MAG5	005508-I	E-DCB4900	0056C8-I
E-DCB.DSC0	0056C8-I	E-DCB5100	005A64-I	E-DCB.DSC1	005A64-I
E-DCB5000	005E00-I	E-DCB.DSC2	005E00-I	E-DCB5200	00619C-I
E-DCB.DSC3	00619C-I	E-DCB5300	006538-I	E-DCB.DSC4	006538-I
E-DCB5400	0069B0-I	E-DCB.DSC5	0069B0-I	E-DCB5900	006E54-I
E-DCB.DSC6	006E54-I	E-DCB6000	0072C0-I	E-DCB.DSC7	0072C0-I
E-DCB6100	00772C-I	E-DCB.DSC8	00772C-I	E-DCB6200	007B9C-I
E-DCB.DSC9	007B9C-I	E-DCB4400	008014-I	E-DCB.DSCA	008014-I
P-EVNGEN	0084C0-I	E-VMT	0084C0-I	E-VMT.FLP1	0084C4-I
E-VMT.FLP2	0084CC-I	E-VMT.DSC0	0084D4-I	E-VMT.DSC1	0084DC-I
E-VMT.DSC2	0084E4-I	F-VMT.DSC3	0084EC-I	F-VMT.DSC4	0084F4-I
E-VMT.DSC5	0084FC-I	E-VMT.DSC6	008504-I	E-VMT.DSC7	00850C-I
E-VMT.DSC8	008514-I	E-VMT.DSC9	00851C-I	E-VMT.DSCA	008524-I
E-LFCON	008530-I	E-LF3900	008530-I	E-LF.FIRST	008530-I
E-EVT	008530-I	E-DMLV	00855C-I	E-TIMELV	008588-I
E-PWL	0085B4-I	E-PICLV	0085E0-I	E-SLICELV	00860C-I
E-LOADLV	008638-I	E-CBUFLV	008664-I	E-LFCRT	008690-I
E-LF3901	008690-I	E-LFCR	0086BC-I	E-LF9600	0086BC-I
E-LFPR	0086E8-I	E-LF11300	0086E8-I	E-LFFLP1	008714-I
E-LF5500	008714-I	F-BIT5500	008740-I	E-DIR5500	00876C-I
E-BIT5501	008798-I	E-DIR5501	0087C4-I	E-LFMAG1	0087F0-I
E-LF6400	0087F0-I	E-LFMAG2	00881C-I	E-LF6500	00881C-I
E-LFDSC0	008848-I	E-LF4900	008848-I	E-BIT4900	008874-I
E-DIR4900	0088A0-I	E-LFDSC1	0088CC-I	E-LF5100	0088CC-I

SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS
E-BIT5100	0088F8-I	E-DIR5100	008924-I	E-BIT5000	008950-I
E-DIR5000	00897C-I	E-LFDSC3	0089A8-I	E-LF5200	0089A8-I
E-BIT5200	0089D4-I	E-DIR5200	008A00-I	E-BIT5300	008A2C-I
E-DIR5300	008A58-I	E-BIT5400	008A84-I	E-DIR5400	008AB0-I
E-BIT5900	008ADC-I	E-DIR5900	008B08-I	E-BIT6000	008B34-I
E-DIR6000	008B60-I	E-BIT6100	008B8C-I	E-DIR6100	008BB8-I
E-BIT6200	008BE4-I	E-DIR6200	008C10-I	E-BIT4400	008C3C-I
E-LF.LAST	008C68-I	E-DIR4400	008C68-I	E-C000	008C94-I
E-C100	008CC0-I	E-C200	008CEC-I	E-C300	008D18-I
E-C400	008D44-I	E-CB600	008D70-I	E-CFB00	008D9C-I
E-SF000	008DC8-I	E-IVTBL	008DF4-I	E-SQ	008E1C-I
E-INITCMD	008E9C-I	P-INITBIOC	008EA0-I	E-INITBIOC	008EA0-I
E-BIOC.ID	008EBC-I	E-TERMBIOC	009394-I	E-BIOC.IOH	00952C-I
E-XLTBIOC	00975C-I	E-XLTPECRT	00979C-I	E-XLTBIOC2	0097DC-I
P-INITMHD	009870-I	E-INITMHD	009870-I	E-SINITMHD	009888-I
E-TERMMHD	009A70-I	P-INITMMD	009DD0-I	E-INITMMD	009DD0-I
E-SINITMMD	009DE8-I	E-TERMMMD	00A2D0-I	E-ESR1MMD	00A2D0-I
E-ESR2MMD	00A314-I	E-ESR3MMD	00A338-I	E-ESR4MMD	00A640-I
E-ESR5MMD	00A6A4-I	E-MMDIOH	00A6E0-I	P-INITFLPY	00A750-I
E-INITFLPY	00A750-I	E-SINITFLP	00A770-I	E-CMDFLP	00A82A-I
E-TERMLP	00A830-I	P-INITMAGS	00A880-I	E-INITMAGS	00A880-I
E-LIKSTACK	00A978-I	E-TERMMAGS	00A9FC-I	E-WRITEM	00AA96-I
E-CMDMAGS	00AC14-I	E-REWINDT	00ACA0-I	E-FSR	00ACD2-I
E-FSRPRIM	00AD06-I	E-BSR	00AD9A-I	E-BSRPRIM	00ADD2-I
E-BFM	00AEAC-I	E-FFM	00AF4C-I	E-WFM	00AFEA-I
E-ERASE	00B212-I	E-ERASE1	00B300-I	E-ESRERS	00B342-I
E-ESRTOUT	00B3A4-I	E-CHECKDU	00B3B4-I	E-STATUS	00B3CC-I
E-FIREIO	00B43A-I	E-DIRREGS	00B460-I	E-REGS	00B484-I
E-FIRECMD	00B494-I	E-CMDSCAN	00B4B8-I	E-EOFTEST	00B4D8-I
E-EOTTESTF	00B52E-I	E-TESTRDY	00B544-I	E-BOTCHECK	00B558-I
E-CRASH	00B660-I	E-GOPULL	00B666-I	E-CCHKDDPS	00B6F2-I
E-GOWAIT	00B716-I	E-ERRDU	00B772-I	E-ERRRECOV	00B77C-I
E-ERRUNREC	00B786-I	E-MTPUNCVR	00B79A-I	E-MTPTOUT	00B7A6-I
E-MTPRCVRB	00B7B2-I	E-ERROR	00B7E0-I	E-IOH6250	00B804-I
P-INITM62E	00B8E0-I	E-INITM62E	00B8E0-I	E-TERM62E	00BA42-I
E-CMDM62E	00C034-I	P-INITCARD	00C370-I	E-INITCARD	00C370-I
E-CARDHARD	00C422-I	E-TERMNCRD	00C4A4-I	P-INITRA29	00C4D0-I
E-INITRA29	00C4D0-I	P-INITLPTR	00C5D0-I	E-INITLPTR	00C5D0-I
E-TERMLPTR	00C87E-I	E-IOHLP	00C95C-I	P-INITVFCS	00C9B0-I
E-INITVFCS	00C9C8-I	E-VFCLFPND	00C9FA-I	E-VFCLFPIS	00CA08-I
E-VFCDIR	00CA16-I	E-VFCNEXTA	00CC88-I	E-VFCIGNOR	00CE00-I
E-VFC.SPB	00CE74-I	E-VFC.LFB	00CEF8-I	E-VFC.FFB	00CF48-I
E-VFC.VTB	00CF4C-I	P-INITSUBS	00CF50-I	E-INITSUBS	00CF50-I
E-ISRTOUT	00CF68-I	E-ISRLEAVE	00CF74-I	E-WRTSELRD	00CF7A-I
E-WRTSELWT	00CFA2-I	E-RDSELCH	00CFC0-I	E-ENDSCAN	00CFE4-I
E-ENDSCAN1	00D01E-I	E-MAXLNGTH	00D06E-I	E-SETISP	00D07E-I
E-SETISPS	00D090-I	F-DIREXIT	00D096-I	E-GETBUFF	00D0A4-I
E-SETBUFF	00D0B0-I	E-TESTVFC	00D0BA-I	E-VFCTLT	00D0C4-I



SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS
E-VFUTLT	00D190-I	E-TABSCAN	00D1E2-I	E-VFUTLTCH	00D1F8-I
E-GETBUFCH	00D20C-I	E-SEHTAB	00D216-I	E-SETVTAB	00D27C-I
E-RESETAB	00D376-I	E-RESETBTS	00D3BC-I	E-CNVNUM	00D3C8-I
E-RSTVTALL	00D440-I	E-RSTVT	00D448-I	E-DOWNLD	00D530-I
E-TOFBUF	00D644-I	E-TOFLFS	00D647-I	E-LFSET	00D648-I
E-SPSET	00D6A0-I	E-VTBUF	00D6F0-I	E-GENXLATE	00D6F4-I
P-CDVR.F01	00D900-I	E-CDVR.F01	00D900-I	E-SVC2.7	00D914-I
E-CIOINCPT	00D9DE-I	E-EXECMSG	00DA3C-I	E-CDSV27	00DB6E-I
E-CDEXTM	00DBA2-I	E-CDESV3	00DBB6-I	E-CDFUTB	00DBD4-I
E-CDEXMY	00DBE4-I	E-CDEXIN	00DC22-I	E-CONDVR	00DC70-I
E-DCBCMD	00DDB4-I	E-IOHCDVR	00DE4C-I	P-CMDB.F33	00DE90-I
E-CMDB.F33	00DE90-I	E-DSPFHD	00DEA4-I	E-TEMPFILE	00DEA6-I
E-SPOLFILE	00E006-I	E-DISPLAY	00EB6A-I	E-LUTST	00EE2A-I
E-DISPFD	00F360-I	E-CHECK.ID	00F68E-I	E-CHECKID	00F692-I
E-SVC7PBLK	00F6DC-I	E-DEBUGNOPR	00FC02-I	E-WFILE	00FC1C-I
E-FFILE	00FC22-I	E-FORREC	00FC28-I	E-BFILE	00FC2E-I
E-BACREC	00FC34-I	E-REWIND	00FC3A-I	E-MOFFBLK	00FE94-I
E-MONBLK	00FFF6-I	E-RVOLUME	010AF4-I	E-VOLUME	010CD0-I
E-XDELETE	010F46-I	E-CMDELETE	010F4A-I	E-XALLOCAT	010FCE-I
E-ALLOCATE	011070-I	E-DISPIND1	011B40-I	E-DISPIND2	011B42-I
E-DIRFN	011B4C-I	E-DIREXT	011B54-I	E-SECTORBF	011C18-I
P-CMEX.F33	011D20-I	E-CMEX.F33	011D20-I	E-CONTINUE	011D34-I
E-TASKERR	011D8C-I	E-START	011DDC-I	E-CANCEL	011E62-I
E-BIAS	011EA0-I	E-WRITE	011F22-I	E-NOPRERR	011F28-I
E-READ	011FBE-I	E-READCMDF	0120C2-I	E-SEQERR	0121B8-I
E-MEMORY	012224-I	E-MEMERR	01235A-I	E-OPTIONS	012374-I
E-SET	01243E-I	E-TASK	012734-I	E-PAUSE	012B7C-I
E-CMCLOSE	012BCE-I	E-CMRENAME	012C96-I	E-REPROTEC	012D5A-I
E-ASSIGN	012DB2-I	E-LUERROR	012DD6-I	E-ASGNERR	012F88-I
E-FDERROR	012FC0-I	E-CMDASGN1	0130E2-I	E-CMDCLOSE	013100-I
E-MARK	01310A-I	E-SEND	0133B0-I	E-.SPL	0133E8-I
E-.MTM	0133FC-I	E-BUILD	013678-I	E-\$BUILD	013698-I
E-BUILD DSP	0136A2-I	E-\$JOB	0136DC-I	E-\$SKIP	01371A-I
E-\$EXIT	013744-I	E-\$CLEAR	013792-I	E-\$TERMJOB	0137D2-I
E-\$TRANS	01380C-I	E-\$IFG	01384A-I	E-\$IFL	013856-I
E-\$IFE	013862-I	E-\$IFNG	01386E-I	E-\$IFNL	01387A-I
E-\$IFNE	013886-I	E-\$IFNULL	013892-I	E-\$IFNULL	0138AA-I
E-\$IFX	0138C0-I	E-\$IFNX	0138CA-I	E-\$ELSE	01391A-I
E-\$ENDC	01394A-I	E-\$WRITE	01396E-I	E-\$COPY	0139BE-I
E-\$NOCOPY	0139CA-I	E-GETFRAC	0139CE-I	E-SPT.UTCB	013D70-I
E-CMDBGT	013D74-I	E-CMDBIAS	013D78-I	E-CMDBGTRC	013D7E-I
E-BUILD FLG	013D80-I	E-CSSLEVEL	013D82-I	E-CSSLIST	013D84-I
E-CSSSKIP	013D86-I	E-IFLVL	013D88-I	E-JOBIFLVL	013D8A-I
E-JOBFLAG	013D8C-I	E-JOBSKIP	013D8E-I	E-PROMODE	013D90-I
E-LOADER	013D92-I	E-REMOVE	014228-I	E-TCOM	014300-I
E-ERRORC	014358-I	P-CMIR.F01	0143A0-I	E-CMIR.F01	0143A0-I
E-SVC2.14	0143B4-I	E-IRBUFFER	0143BA-I	E-IREADER	0143C4-I
E-IRDRINIT	0143C8-I	P-CMON.F01	0143D0-I	E-CMON.F01	0143D0-I

SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS
E-CMSP.UDL	0143E4-I	E-COMMAND	014480-I	E-CMDP.TCB	014BB8-I
E-ATTN.P	014C5D-I	E-LOGFLAG	014C70-I	E-LOGCKPTI	014C72-I
E-LOGCKCNT	014C74-I	P-CMSP.F33	014D00-I	E-CMSP.F33	014D00-I
E-CMDP.UDL	014D14-I	E-CMDP.Q	014D94-I	E-CMDEMPTY	014E3C-I
E-CMDP.GO	014FD8-I	E-PICADDR	015282-I	E-FLTPFLAG	01529C-I
E-CMDNEXT	0152C8-I	E-CSKIPA	0153AE-I	E-CSSTST	015434-I
E-CMDPSYSG	0157C2-I	E-FORMERR	01580A-I	E-PARMERR	015812-I
E-IOERR	015856-I	E-CMDERROR	01585E-I	E-CMDERREX	01586C-I
E-ERR.COM	0158EC-I	E-ERR.COM1	0158F0-I	E-ERR.ASGN	0158F8-I
E-TIMERR	015924-I	E-SETLU	015942-I	E-CHECKCSL	01596E-I
E-COMMACK1	015998-I	E-COMMACK	015998-I	E-SCANNER	0159AC-I
E-TERMCHK	0159BA-I	E-MNMFIN	0159C6-I	E-CSSBUF	015A2C-I
E-CSSCLOSE	015A4A-I	E-MSGLOG	015A68-I	E-PREPRO	015ABC-I
E-BLANKBUF	015C32-I	E-CMDWGB	015C46-I	E-CMDWGBX	015C48-I
E-CMDWRITE	015C50-I	E-CMDERMV	015C92-I	E-CMDTYMV	015CAC-I
E-XAIDSBRK	015E44-I	E-CMDRDBLK	015EF4-I	E-SV1ERTB	015FA8-I
E-IOEMSG	015FFC-I	E-CSLTSK	01632C-I	E-CSSTSK	016330-I
E-TESTPRT	016336-I	E-GENBUFF	016350-I	E-GENBUF05	016355-I
E-GENBUF06	016356-I	E-GENBUF07	016357-I	E-GENBUF08	016358-I
E-GENBUF09	016359-I	E-GENBUF10	01635A-I	E-GENBUF11	01635B-I
E-GENBUF12	01635C-I	E-GENBUF13	01635D-I	E-GENBUF14	01635E-I
E-GENBUF15	01635F-I	E-GENBUF16	016360-I	E-GENBUF17	016361-I
E-GENBUF18	016362-I	E-GENBUF19	016363-I	E-GENBUF20	016364-I
E-GENBUF21	016365-I	E-GENBUF22	016366-I	E-GENBUF23	016367-I
E-GENBUF24	016368-I	E-GENBUF25	016369-I	E-GENBUF26	01636A-I
E-GENBUF27	01636B-I	E-GENBUF28	01636C-I	E-GENBUF29	01636D-I
E-GENBUF30	01636E-I	E-GENBUF31	01636F-I	E-GENBUF32	016370-I
E-GENBUF33	016371-I	E-GENBUF34	016372-I	E-GENBUF35	016373-I
E-GENBUF36	016374-I	E-GENBUF37	016375-I	E-GENBUF38	016376-I
E-GENBUF39	016377-I	E-GENBUF40	016378-I	E-GENBUF41	016379-I
E-GENBUF42	01637A-I	E-GENBUF43	01637B-I	E-GENBUF44	01637C-I
E-GENBUF45	01637D-I	E-GENBUF46	01637E-I	E-GENBUF47	01637F-I
E-GENBUF48	016380-I	E-GENBUF49	016381-I	E-GENBUF50	016382-I
E-GENBUF51	016383-I	E-GENBUF52	016384-I	E-GENBUF53	016385-I
E-GENBUF54	016386-I	E-GENBUF55	016387-I	E-GENBUF56	016388-I
E-GENBUF57	016389-I	E-GENBUF58	01638A-I	E-GENBUF59	01638B-I
E-GENBUF60	01638C-I	E-GENBUF61	01638D-I	E-GENBUF62	01638E-I
E-GENBUF63	01638F-I	E-GENBUF64	016390-I	E-GENBUF65	016391-I
E-GENBUF66	016392-I	E-GENBUF67	016393-I	E-GENBUF68	016394-I
E-GENBUF69	016395-I	E-GENBUF70	016396-I	E-GENBUF71	016397-I
E-GENBUF72	016398-I	E-GENBUF73	016399-I	E-GENBUF74	01639A-I
E-GENBUF75	01639B-I	P-ERRC.F01	0163E0-I	E-ERRC.F01	0163E0-I
E-MERD.TEF	0163F4-I	E-MERD.STA	0163F4-I	E-MERD.CNF	0163F4-I
E-MER.SCHD	0163F4-I	E-MER.RSCH	0163F4-I	E-MEMERLV	0163F4-I
E-MCONFIG	0163F4-I	E-FMERRLV	0163F4-I	E-ERC.GINI	0163F4-I
E-ERC.BLST	0163F4-I	E-MER.CNCL	0163F8-I	E-ERC.RECD	0163FE-I
E-ERC.PERD	016408-I	E-ERC.DISP	016412-I	E-ERC.LOG	01641C-I
E-MER.LOG	016426-I	E-ERC.MENT	016428-I	E-ERC.DVRS	016428-I

SYMBOL	--	ADDRESS	SYMBOL	--	ADDRESS	SYMBOL	--	ADDRESS
E-ERC.FMSQ		01642C-I	E-ERC.BTMR		01642C-I	E-ERC.BTMA		01642C-I
E-ERC.DRBL		01642E-I	E-ERC.IXPR		016430-I	E-ERC.DRPR		016430-I
E-ERC.TQOV		016432-I	E-ERC.SQFL		016434-I	E-ERC.SQNL		016436-I
E-ERC.SQDR		016436-I	E-ERC.MKON		016438-I	E-ERC.MKOF		01643A-I
E-ERC.MNNB		01643C-I	F-ERC.MFNB		01643C-I	E-ERC.VOL		01643E-I
E-ERC.SQDP		016440-I	E-ERC.TREN		016446-I	E-ERC.TRE2		016446-I
E-ERC.PFR		016446-I	E-CMDPERFG		01644C-I	P-EXAC.F01		016450-I
E-EXAC.F01		016450-I	E-TMCPUOFF		016464-I	E-TMCPUON		016466-I
E-TCPU.TIM		01646C-I	E-TCPU.TCB		016474-I	E-TCPU.TYP		016478-I
E-HOLDTIME		016480-I	E-ACUMTIME		016480-I	E-ACT.BMSG		016486-I
E-ACT.SMSG		016488-I	E-SVC2.25		01648A-I	E-SVC2.24		01648A-I
E-SV4.RMAW		016490-I	E-SV4.RDAC		016490-I	E-SV4.ENAC		016490-I
E-ACCTZERO		016496-I	E-DSPACCT		016498-I	P-EXIN.F53		0164B0-I
E-EXIN.F53		0164B0-I	E-IIH		016570-I	E-MEMFLTRS		0165F0-I
E-MEMFAULT		016680-I	E-ISHRS		016692-I	E-ISH		0166B8-I
E-MMH		016D48-I	E-SQS2DISP		017678-I	E-DISP2SQS		017690-I
E-SYSINIT		0176DA-I	E-REL.MASK		017A88-I	E-CTR162		01837C-I
E-EREGS		0183F0-I	E-XREGS		018430-I	P-EXIO.F01		018470-I
E-EXIO.F01		018470-I	E-SVC1		018484-I	E-SVC1.0		018486-I
E-SV1ADER1		01868A-I	E-COMIOH		0186A0-I	E-SVC1WRIT		0186E4-I
E-SVC1READ		0186E4-I	E-SVC1WFM		018722-I	E-SVC1REW		018722-I
E-SVC1FSR		018722-I	F-SVC1FFM		018722-I	E-SVC1DDF		018722-I
E-SVC1BSR		018722-I	E-SVC1BFM		018722-I	E-WAITIO		01876E-I
E-SVC1WAIT		018798-I	E-SVC1TEST		018834-I	E-SVC1HALT		018890-I
E-H1NCON		0188E6-I	E-H1EEXIT		0189F4-I	E-SVC1EXIT		018A0C-I
E-SV1FCER		018A72-I	E-SVC1NOOP		018A90-I	E-SVC1INA		018AD0-I
E-SVC1IA		018AD6-I	E-SVC1NIA		018ADE-I	E-SVC1NINA		018AEC-I
E-DCB25500		018AF4-I	E-NULLIOH		018B8C-I	E-BAREIOH		018BD0-I
E-MDISKINI		018C14-I	E-BARETST		018C6E-I	E-BAREWR		018C80-I
E-BARERD		018C80-I	E-IOSETCC		018EA0-I	E-DIRDONE		018EB4-I
E-SQS.EX		018EC6-I	E-EVRTE		018EC6-I	E-SQS		018ECC-I
E-SQS.TIME		018F2C-I	E-SQS.TSL		018F40-I	E-SQS.SLV		018F4E-I
E-SQS.MLV		018F62-I	E-IODONE2		018F9C-I	E-IODONE		018F9C-I
E-IODCOM		018FB0-I	E-IODCOM2		018FE4-I	E-GETIOB		018FF0-I
E-RELI0B		019022-I	E-COMQ		019030-I	E-COMFIFO		019048-I
E-DISKQ		0190C8-I	E-SEEKPOS		0190CC-I	E-SEEKCHK		0190D6-I
E-LEAFQ		0190DA-I	E-LEAFCON		01910A-I	E-EVQCON		0191F6-I
E-EVCON		0191FC-I	E-EVDIS		0192E0-I	E-IODGST		0193CC-I
E-IODGST2		01940E-I	E-IODTWT		019416-I	E-IODTWT2		019452-I
E-NSEVREL		019474-I	E-EVREL		019474-I	E-COMDIS		0194BC-I
E-EVMOD		01956C-I	E-TOITAMIO		01957E-I	P-EXLD.F52		019590-I
E-EXLD.F52		019590-I	E-LOAD.SRF		0195A4-I	E-LOADING		0195F4-I
E-LOADTASK		0196D0-I	E-TCBLOOK		01A670-I	E-TCBLOOK2		01A672-I
E-SEG.ADD		01A6A6-I	E-SEG.RMV		01A7F4-I	E-PUR.SCAN		01A938-I
E-SEG.SCAN		01A93E-I	E-SEG.DIS		01ADA2-I	E-RELPST		01AF30-I
E-LOADSEG		01AF94-I	E-PSWSAV		01B2B8-I	P-EXMY.F52		01B2D0-I
E-EXMY.F52		01B2D0-I	E-SVC2.2		01B2E4-I	E-SVC2.3		01B394-I
E-SVC2.20		01B3D0-I	E-SVC2.21		01B3DC-I	E-GETTQE		01B410-I

SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS
E-RELTQE	01B42C-I	E-GETFCB	01B45C-I	E-RELEFCB	01B4E4-I
E-GETZERO	01B554-I	F-GETMEM	01B56C-I	E-RELMEM	01B5CC-I
E-GETTCB	01B676-I	E-RELTCB	01B68C-I	E-RELTCB1	01B690-I
E-GETSDE	01B69A-I	E-RELSDE	01B6AC-I	E-GETSTSYF	01B6B4-I
E-GETSYP	01B6BC-I	E-RELSYP	01B7E2-I	E-ROERMSG	01B8A8-I
E-ROERTYPE	01B8B8-I	E-ROERNAME	01B8C8-I	E-ROERSTYP	01B8E0-I
E-ROERMSSGE	01B8E3-I	E-SEGTYPE	01B8E4-I	P-EXSP.F53	01B910-I
E-EXSP.F53	01B910-I	E-SVC2	01B924-I	E-TERM	01C306-I
E-TERM1	01C30C-I	E-CANEOJ	01C842-I	E-EXECSRCC	01C95C-I
E-UNPACK	01C978-I	E-JOURNAL	01C9E0-I	E-TIMEOUT	01C9E4-I
E-ADCHKF1	01CA36-I	E-ADCHKF	01CA40-I	E-ADCHK	01CA48-I
E-ADCHK1	01CA54-I	E-ADCHK2F1	01CA98-I	E-ADCHK2F	01CAA2-I
E-ADCHK2	01CAAA-I	E-ADCHK2F2	01CAB6-I	E-ADCHKNS	01CAC6-I
E-ADCHKNS1	01CAD6-I	E-ADCHK2ET	01CB58-I	E-DE.ADCHK	01CB80-I
P-EXSV.F52	01CC30-I	E-EXSV.F52	01CC30-I	E-SVC3	01CC44-I
E-SV3.TERM	01CC54-I	E-COMEOT	01CD44-I	E-DISPPSW	01D148-I
E-SVC9	01D162-I	E-SVC14	01D20A-I	E-SVC4	01D22E-I
E-SV4.NEXT	01D374-I	E-SV4.ERR3	01D38E-I	E-SVC5	01D3FA-I
E-SV6ERCD	01D58C-I	E-SV6ERTB	01D5B0-I	E-SVC6	01D6B0-I
E-SUBCKRPT	01DE78-I	E-SUBRPORT	01DE7A-I	E-SUBRPTNS	01DED6-I
E-MTMRPTNS	01DEE0-I	E-SETUTOP	01E258-I	E-SETDELAY	01E2B6-I
E-SVC10	01E5D4-I	P-EXTI.F01	01EA00-I	E-EXTI.F01	01EA00-I
E-SVC2.8	01EA14-I	E-SVC2.9	01EB0E-I	E-SVC2.10	01EBAA-I
E-SVC2.11	01EBAE-I	E-SVC2.23	01EBC4-I	E-GETUREG	01EFA2-I
E-TICAN	01F188-I	E-TICAN1	01F18C-I	E-TIFXTCHN	01F27C-I
E-PICESR	01F43E-I	E-TIMESR	01F542-I	E-CPU.TIME	01F7DC-I
E-TM.FREQ	01F7E4-I	E-TM30DAYS	01F7E5-I	E-TM.FEB	01F7E7-I
E-ITAMFREQ	01F7FA-I	E-ITM.FREQ	01F7FC-I	E-TOCHON	01F7FE-I
E-TOCHOFF	01F822-I	P-EXTM.F52	01F860-I	E-EXTM.F52	01F860-I
E-SV9.ATQ1	01F874-I	E-SV9.ATQ	01F87A-I	E-SV9.ASQ1	01F87E-I
E-SV9.ASQ	01F884-I	E-SV9.TSWN	01F9A8-I	E-SV9.STSW	01F9AE-I
E-TMDISP	01FA60-I	E-ROLLPRIO	01FA72-I	E-TMRDISP	01FA74-I
E-TMRD.MAC	01FB72-I	E-TMNSOUT	02010C-I	E-TMSTART	020136-I
E-TMSTOPW	020198-I	E-TMSTOP	02019E-I	E-TMRSAIN	0201E4-I
E-TMRSIN1	0201FC-I	E-TMRSIN	0201FC-I	E-TMRSARS	0202E6-I
E-TMRSRSA	020306-I	E-TMRSOUT	020356-I	E-TMRSOTNS	020364-I
E-TMRSABOUT	0203A2-I	E-TMREMW	020444-I	E-TMCHN	0204BC-I
E-TMUCHN	020520-I	P-FLTP.F04	020580-I	E-FLTP.F04	020580-I
E-FLTP	020594-I	E-FLTPDEBUG	021A98-I	P-FMCO.F33	021AA0-I
E-FMCO.F33	021AA0-I	E-CNTGIOH	021AB4-I	P-FMIN.F33	022280-I
E-FMIN.F33	022280-I	E-INDXIOH	022294-I	E-INDEXC	0222E6-I
E-COMN01	0222F4-I	E-ISSUEIO	022B30-I	E-INX.ZBUF	022BAC-I
E-INX.READ	022BDA-I	E-INX.FORL	022C3E-I	E-INX.CINX	022D94-I
E-RESET.IN	022DB6-I	P-FMNB.F33	023010-I	E-FMNB.F33	023010-I
E-NBUFFIOH	023024-I	E-NBUFF00	023068-I	E-NBF.CINX	023532-I
E-NBF.POSN	0235B6-I	E-NBF.FORL	023674-I	E-RESET.NB	0237A6-I
P-FMS7.F34	023940-I	E-FMS7.F34	023940-I	E-SVC7	023954-I
E-SV7.CMD	023AFC-I	E-OPN.BDSK	023DA8-I	E-OPEN.DEV	023E00-I

SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS
E-OPD.NRJE	023EC8-I	E-RESET.RW	025864-I	E-RESET	025864-I
E-WAITRS	025BAC-I	E-TESTRS	025BFC-I	E-ERR.NB	02600E-I
E-ERR.02	026012-I	E-ERR.OB	02603A-I	P-FMUT.F33	026430-I
E-FMUT.F33	026430-I	E-APCHECK	026444-I	E-APCHECK1	026524-I
E-APCHECK2	026530-I	E-DATE.DIR	0265D0-I	E-GETSECTR	0265FC-I
E-PUTB	0269A8-I	E-RELEB	026A26-I	E-FDCHECK	026B14-I
E-DEVCHECK	026B46-I	E-ACCHECK	026BD4-I	E-LUCHECK	026C50-I
E-DIRLOOK	026C6A-I	E-MAKEXFNM	026F40-I	E-GETD	026F94-I
E-PUTD	027008-I	E-DMTLOOK	027024-I	E-VMTLOOK	027054-I
E-ALLOD	02705E-I	E-SET.LRCL	0272FC-I	E-MOVE	02732C-I
E-MOVE1	027538-I	E-MOVENULL	02754E-I	P-INTC.F01	027590-I
E-INTC.F01	027590-I	E-SV4ITRAP	0275A4-I	E-SV4ITERM	0275A4-I
E-SV4IROLL	0275A4-I	F-SV4IREMV	0275A4-I	E-SV4IPUT	0275A4-I
E-SV4IPROC	0275A4-I	E-SV4IGET	0275A4-I	E-SV4ICRTE	0275A4-I
E-SV4ICRSP	0275A4-I	E-SV4ICONT	0275A4-I	E-STRTINTC	0275B0-I
E-INTERCPT	0275B0-I	E-ENDINTC	0275B0-I	E-DORSINTC	0275B0-I
E-XTCBLOOK	0275B6-I	E-XDMTLOOK	0275B6-I	E-IPPAUSCHK	0275B8-I
P-MCHK.F02	0275C0-I	E-MCHK.F02	0275C0-I	E-MEMONOFF	0275D4-I
E-MEMCHK2	02791A-I	E-MEMCHKER	0279F0-I	E-MKOFMEM	027ED2-I
E-INITMTST	028102-I	P-DUMP.F01	0283D0-I	E-DUMP.F01	0283D0-I
E-PANIC	0283E4-I	E-MSG	028A6E-I	E-GETC	028A9E-I
E-TOPCSRCH	028B66-I	E-DMP.SOPT	028CC8-I	E-CON.GET	028CDA-I
E-CON.PUT	028CDB-I	E-DUMP.CON	028CDC-I	E-DUMP.CNW	028CDE-I
P-ITFM.M00	028FD0-I	E-ITFM.M00	028FD0-I	E-SVC15	028FE2-I
E-CANITAM	028FE8-I	E-IT.OPEN	028FEE-I	E-IT.DELET	028FF4-I
E-IT.ALLOC	028FF4-I	E-IT.ORJE	029000-I	E-IT.FETCH	029000-I
E-IT.CLOSE	029000-I	E-IT.CHKPT	029000-I	E-IT.CAP	029000-I
E-IT.RSLU	02900C-I	E-GETCPH	02900E-I	E-ITEMTLF	029020-I
E-ITAMTIMC	029020-I	E-ITAMCNT	029020-I	E-EMT.FREQ	029020-I
P-UBOT.F01	029030-I	E-UBOT.F01	029030-I	E-UBOT.0	029044-I
E-OS.PATCH	029044-I	E-UBOT	029164-I	E-OS.END	029164-I

-- IMAGE LINKED AT 14:05:27 ON MARCH 27, 1983 --

SYMBOL	-- NODE	-- ADDRESS	SYMBOL	-- NODE	-- ADDRESS
E-\$BUILD	.ROOT	013698-I	E-\$CLEAR	.ROOT	013792-I
E-\$COPY	.ROOT	0139BE-I	E-\$ELSE	.ROOT	01391A-I
E-\$ENDC	.ROOT	01394A-I	E-\$EXIT	.ROOT	013744-I
E-\$IFE	.ROOT	013862-I	E-\$IFG	.ROOT	01384A-I
E-\$IFL	.ROOT	013856-I	E-\$IFNE	.ROOT	013886-I
E-\$IFNG	.ROOT	01386E-I	E-\$IFNL	.ROOT	01387A-I
E-\$IFNNULL	.ROOT	0138AA-I	E-\$IFNULL	.ROOT	013892-I
E-\$IFNX	.ROOT	0138CA-I	E-\$IFX	.ROOT	0138C0-I
E-\$INITFLP	.ROOT	00A770-I	E-\$INITMHD	.ROOT	009888-I
E-\$INITMMD	.ROOT	009DE8-I	E-\$JOB	.ROOT	0136DC-I
E-\$NOCOPY	.ROOT	0139CA-I	E-\$SKIP	.ROOT	01371A-I
E-\$TERMJOB	.ROOT	0137D2-I	E-\$STRANS	.ROOT	01380C-I
E-\$WRITE	.ROOT	01396E-I	E-.MTM	.ROOT	0133FC-I
E-.SPL	.ROOT	0133E8-I	E-ACCHECK	.ROOT	026BD4-I
E-ACCTZERO	.ROOT	016496-I	E-ACT.BMSG	.ROOT	016486-I
E-ACT.SMSG	.ROOT	016488-I	E-ACUMTIME	.ROOT	016480-I
E-ADCHK	.ROOT	01CA48-I	E-ADCHK1	.ROOT	01CA54-I
E-ADCHK2	.ROOT	01CAAA-I	E-ADCHK2ET	.ROOT	01CB58-I
E-ADCHK2F	.ROOT	01CAA2-I	E-ADCHK2F1	.ROOT	01CA98-I
E-ADCHK2F2	.ROOT	01CAB6-I	E-ADCHKF	.ROOT	01CA40-I
E-ADCHKF1	.ROOT	01CA36-I	E-ADCHKNS	.ROOT	01CAC6-I
E-ADCHKNS1	.ROOT	01CAD6-I	E-ALLOCATE	.ROOT	011070-I
E-ALLOD	.ROOT	02705E-I	E-APCHECK	.ROOT	026444-I
E-APCHECK1	.ROOT	026524-I	E-APCHECK2	.ROOT	026530-I
E-ASGNERR	.ROOT	012F88-I	E-ASSIGN	.ROOT	012DB2-I
E-ATTN.P	.ROOT	014C5D-I	E-BACREC	.ROOT	00FC34-I
E-BAREIOH	.ROOT	018BD0-I	E-BARERD	.ROOT	018C80-I
E-BARETST	.ROOT	018C6E-I	E-BAREWR	.ROOT	018C80-I
E-BFILE	.ROOT	00FC2E-I	E-BFM	.ROOT	00AEAC-I
E-BIAS	.ROOT	011EA0-I	E-BIO.OCIV	.ROOT	002162-P
E-BIO.PPTO	.ROOT	002160-P	E-BIOC.ID	.ROOT	008EBC-I
E-BIOC.IOH	.ROOT	00952C-I	E-BIT4400	.ROOT	008C3C-I
E-BIT4900	.ROOT	008874-I	E-BIT5000	.ROOT	008950-I
E-BIT5100	.ROOT	0088F8-I	E-BIT5200	.ROOT	0089D4-I
E-BIT5300	.ROOT	008A2C-I	E-BIT5400	.ROOT	008A84-I
E-BIT5500	.ROOT	008740-I	E-BIT5501	.ROOT	008798-I
E-BIT5900	.ROOT	008ADC-I	E-BIT6000	.ROOT	008B34-I
E-BIT6100	.ROOT	008B8C-I	E-BIT6200	.ROOT	008BE4-I
E-BLANKBUF	.ROOT	015C32-I	E-BOTCHECK	.ROOT	00B558-I
E-BSR	.ROOT	00AD9A-I	E-BSRPRIM	.ROOT	00ADD2-I
E-BUILD	.ROOT	013678-I	E-BUILD DSP	.ROOT	0136A2-I
E-BUILD FLG	.ROOT	013D80-I	E-C000	.ROOT	008C94-I
E-C100	.ROOT	008CC0-I	E-C200	.ROOT	008CEC-I
E-C300	.ROOT	008D18-I	E-C400	.ROOT	008D44-I
E-CANCEL	.ROOT	011E62-I	E-CANEOJ	.ROOT	01C842-I
E-CANITAM	.ROOT	028FE8-I	E-CARDHARD	.ROOT	00C422-I
E-CB600	.ROOT	008D70-I	E-CBUFLV	.ROOT	008664-I
E-CCB11300	.ROOT	000A9C-P	E-CCB3900	.ROOT	000A00-P

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SYMBOL	-- NODE	-- ADDRESS	SYMBOL	-- NODE	-- ADDRESS
E-CCB3901	.ROOT	000A40-P	E-CCB4900	.ROOT	000B7C-P
E-CCB5100	.ROOT	000B98-P	E-CCB5200	.ROOT	000BB4-P
E-CCB5500	.ROOT	000AB8-P	E-CCB5501	.ROOT	000AD4-P
E-CCB6400	.ROOT	000AF0-P	E-CCB6500	.ROOT	000B0C-P
E-CCB6800	.ROOT	000B28-P	E-CCB6900	.ROOT	000B44-P
E-CCB7000	.ROOT	000B60-P	E-CCB9600	.ROOT	000A80-P
E-CCBDSCO	.ROOT	000B7C-P	E-CCBDSC1	.ROOT	000B98-P
E-CCBDSC3	.ROOT	000BB4-P	E-CCBFLP1	.ROOT	000AB8-P
E-CCBFLP2	.ROOT	000AD4-P	E-CCBMAG1	.ROOT	000AF0-P
E-CCX3900	.ROOT	000A1C-P	E-CCX3901	.ROOT	000A5C-P
E-CDESV3	.ROOT	00DBB6-I	E-CDEXIN	.ROOT	00DC22-I
E-CDEXMY	.ROOT	00DBE4-I	E-CDEXTM	.ROOT	00DBA2-I
E-CDFUTB	.ROOT	00DBD4-I	E-CDSV27	.ROOT	00DB6E-I
P-CDVR.F01	.ROOT	00D900-I	E-CDVR.F01	.ROOT	00D900-I
E-CFB00	.ROOT	008D9C-I	E-CHCKDDPS	.ROOT	00B6F2-I
E-CHECK.ID	.ROOT	00F68E-I	E-CHECKCSL	.ROOT	01596E-I
E-CHECKDU	.ROOT	00B3B4-I	E-CHECKID	.ROOT	00F692-I
E-CIOINCPT	.ROOT	00D9DE-I	E-CMCLOSE	.ROOT	012BCE-I
E-CMDASGN1	.ROOT	0130E2-I	P-CMDB.F33	.ROOT	00DE90-I
E-CMDB.F33	.ROOT	00DE90-I	E-CMDBGT	.ROOT	013D74-I
E-CMDBGTRC	.ROOT	013D7E-I	E-CMDBIAS	.ROOT	013D78-I
E-CMDBUFFS	.ROOT	003B20-I	E-CMDCLOSE	.ROOT	013100-I
E-CMDELETE	.ROOT	010F4A-I	E-CMEMPTY	.ROOT	014E3C-I
E-CMDERMV	.ROOT	015C92-I	E-CMDERREX	.ROOT	01586C-I
E-CMDERROR	.ROOT	01585E-I	E-CMDFLP	.ROOT	00A82A-I
E-CMDM62E	.ROOT	00C034-I	E-CMDMAGS	.ROOT	00AC14-I
E-CMDNEXT	.ROOT	0152C8-I	E-CMDP.GO	.ROOT	014FD8-I
E-CMDP.Q	.ROOT	014D94-I	E-CMDP.TCB	.ROOT	014BB8-I
E-CMDP.UDL	.ROOT	014D14-I	E-CMDPERFG	.ROOT	01644C-I
E-CMDPSYSG	.ROOT	0157C2-I	E-CMDPTCB	.ROOT	003800-I
E-CMDRDBLK	.ROOT	015EF4-I	E-CMDSCAN	.ROOT	00B4B8-I
E-CMDTYMV	.ROOT	015CAC-I	E-CMDWGB	.ROOT	015C46-I
E-CMDWGBX	.ROOT	015C48-I	E-CMDWRITE	.ROOT	015C50-I
P-CMEX.F33	.ROOT	011D20-I	E-CMEX.F33	.ROOT	011D20-I
E-CMIR.F01	.ROOT	0143A0-I	P-CMIR.F01	.ROOT	0143A0-I
P-CMON.F01	.ROOT	0143D0-I	E-CMON.F01	.ROOT	0143D0-I
E-CMRENAME	.ROOT	012C96-I	E-CMSP.F33	.ROOT	014D00-I
P-CMSP.F33	.ROOT	014D00-I	E-CMSP.UDL	.ROOT	0143E4-I
E-CNTGIOH	.ROOT	021AB4-I	E-CNVNUM	.ROOT	00D3C8-I
E-COMDIS	.ROOT	0194BC-I	E-COMEOT	.ROOT	01CD44-I
E-COMFIFO	.ROOT	019048-I	E-COMIOH	.ROOT	0186A0-I
E-COMMACK	.ROOT	015998-I	E-COMMACK1	.ROOT	015998-I
E-COMMAND	.ROOT	014480-I	E-COMN01	.ROOT	0222F4-I
E-COMQ	.ROOT	019030-I	E-CON.GET	.ROOT	028CDA-I
E-CON.PUT	.ROOT	028CDB-I	E-CONDVR	.ROOT	00DC70-I
E-CONTINUE	.ROOT	011D34-I	E-CPU.TIME	.ROOT	01F7DC-I
E-CRASH	.ROOT	00B660-I	E-CSKIPA	.ROOT	0153AE-I
E-CSLTSK	.ROOT	01632C-I	E-CSSBUF	.ROOT	015A2C-I

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SYMBOL	-- NODE	-- ADDRESS	SYMBOL	-- NODE	-- ADDRESS
E-CSSCLOSE	.ROOT	015A4A-I	E-CSSLEVEL	.ROOT	013D82-I
E-CSSLIST	.ROOT	013D84-I	E-CSSSKIP	.ROOT	013D86-I
E-CSSTSK	.ROOT	016330-I	E-CSSTST	.ROOT	015434-I
E-CTR162	.ROOT	01837C-I	E-DATE.DIR	.ROOT	0265D0-I
E-DEBUGNOPR	.ROOT	00FC02-I	E-DCB.CON	.ROOT	0040E0-I
E-DCB.CR	.ROOT	004510-I	E-DCB.CRT	.ROOT	0042F8-I
E-DCB.DSCO	.ROOT	0056C8-I	E-DCB.DSC1	.ROOT	005A64-I
E-DCB.DSC2	.ROOT	005E00-I	E-DCB.DSC3	.ROOT	00619C-I
E-DCB.DSC4	.ROOT	006538-I	E-DCB.DSC5	.ROOT	0069B0-I
E-DCB.DSC6	.ROOT	006E54-I	E-DCB.DSC7	.ROOT	0072C0-I
E-DCB.DSC8	.ROOT	00772C-I	E-DCB.DSC9	.ROOT	007B9C-I
E-DCB.DSCA	.ROOT	008014-I	E-DCB.FLP1	.ROOT	0046D0-I
E-DCB.FLP2	.ROOT	004A6C-I	E-DCB.MAG1	.ROOT	004E08-I
E-DCB.MAG2	.ROOT	004FC8-I	E-DCB.MAG3	.ROOT	005188-I
E-DCB.MAG4	.ROOT	005348-I	E-DCB.MAG5	.ROOT	005508-I
E-DCB.PR	.ROOT	0045AC-I	E-DCB11300	.ROOT	0045AC-I
E-DCB25500	.ROOT	018AF4-I	E-DCB3900	.ROOT	0040E0-I
E-DCB3901	.ROOT	0042F8-I	E-DCB4400	.ROOT	008014-I
E-DCB4900	.ROOT	0056C8-I	E-DCB5000	.ROOT	005E00-I
E-DCB5100	.ROOT	005A64-I	E-DCB5200	.ROOT	00619C-I
E-DCB5300	.ROOT	006538-I	E-DCB5400	.ROOT	0069B0-I
E-DCB5500	.ROOT	0046D0-I	E-DCB5501	.ROOT	004A6C-I
E-DCB5900	.ROOT	006E54-I	E-DCB6000	.ROOT	0072C0-I
E-DCB6100	.ROOT	00772C-I	E-DCB6200	.ROOT	007B9C-I
E-DCB6400	.ROOT	004E08-I	E-DCB6500	.ROOT	004FC8-I
E-DCB6800	.ROOT	005188-I	E-DCB6900	.ROOT	005348-I
E-DCB7000	.ROOT	005508-I	E-DCB9600	.ROOT	004510-I
E-DCBCMD	.ROOT	00DDB4-I	P-DCBS	.ROOT	000A00-P
P-DCBS	.ROOT	0040E0-I	E-DE.ADCHK	.ROOT	01CB80-I
E-DEVCHECK	.ROOT	026B46-I	E-DIR4400	.ROOT	008C68-I
E-DIR4900	.ROOT	0088A0-I	E-DIR5000	.ROOT	00897C-I
E-DIR5100	.ROOT	008924-I	E-DIR5200	.ROOT	008A00-I
E-DIR5300	.ROOT	008A58-I	E-DIR5400	.ROOT	008AB0-I
E-DIR5500	.ROOT	00876C-I	E-DIR5501	.ROOT	0087C4-I
E-DIR5900	.ROOT	008B08-I	E-DIR6000	.ROOT	008B60-I
E-DIR6100	.ROOT	008BB8-I	E-DIR6200	.ROOT	008C10-I
E-DIRDONE	.ROOT	018EB4-I	E-DIREXIT	.ROOT	00D096-I
E-DIREXT	.ROOT	011B54-I	E-DIRFN	.ROOT	011B4C-I
E-DIRLOOK	.ROOT	026C6A-I	E-DIRREGS	.ROOT	00B460-I
E-DISKQ	.ROOT	0190C8-I	E-DISP2SQS	.ROOT	017690-I
E-DISPFD	.ROOT	00F360-I	E-DISPIND1	.ROOT	011B40-I
E-DISPIND2	.ROOT	011B42-I	E-DISPLAY	.ROOT	00EB6A-I
E-DISPPSW	.ROOT	01D148-I	E-DMLV	.ROOT	00855C-I
E-DMP.SOPT	.ROOT	028CC8-I	E-DMT	.ROOT	004020-I
E-DMT.CON	.ROOT	004028-I	E-DMT.CR	.ROOT	004038-I
E-DMT.CRT	.ROOT	004030-I	E-DMT.DSCO	.ROOT	004080-I
E-DMT.DSC1	.ROOT	004088-I	E-DMT.DSC2	.ROOT	004090-I
E-DMT.DSC3	.ROOT	004098-I	E-DMT.DSC4	.ROOT	0040A0-I



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SYMBOL	-- NODE	-- ADDRESS	SYMBOL	-- NODE	-- ADDRESS
E-DMT.DSC5	.ROOT	0040A8-I	E-DMT.DSC6	.ROOT	0040B0-I
E-DMT.DSC7	.ROOT	0040B8-I	E-DMT.DSC8	.ROOT	0040C0-I
E-DMT.DSC9	.ROOT	0040C8-I	E-DMT.DSCA	.ROOT	0040D0-I
E-DMT.FLP1	.ROOT	004048-I	E-DMT.FLP2	.ROOT	004050-I
E-DMT.MAG1	.ROOT	004058-I	E-DMT.MAG2	.ROOT	004060-I
E-DMT.MAG3	.ROOT	004068-I	E-DMT.MAG4	.ROOT	004070-I
E-DMT.MAG5	.ROOT	004078-I	E-DMT.PR	.ROOT	004040-I
P-DMTINIT	.ROOT	004020-I	E-DMTLOOK	.ROOT	027024-I
E-DMTNULL	.ROOT	004020-I	E-DORSINTC	.ROOT	0275B0-I
E-DOWNLD	.ROOT	00D530-I	E-DSPACCT	.ROOT	016498-I
E-DSPFHD	.ROOT	00DEA4-I	E-DUMP.CNW	.ROOT	028CDE-I
E-DUMP.CON	.ROOT	028CDC-I	P-DUMP.F01	.ROOT	0283D0-I
E-DUMP.F01	.ROOT	0283D0-I	E-EMT.FREQ	.ROOT	029020-I
E-ENDINTC	.ROOT	0275B0-I	E-ENDSCAN	.ROOT	00CFE4-I
E-ENDSCAN1	.ROOT	00D01E-I	E-EOTTEST	.ROOT	00B4D8-I
E-EOTTESTF	.ROOT	00B52E-I	E-ERASE	.ROOT	00B212-I
E-ERASE1	.ROOT	00B300-I	E-ERC.BLST	.ROOT	0163F4-I
E-ERC.BTMA	.ROOT	01642C-I	E-ERC.BTMR	.ROOT	01642C-I
E-ERC.DISP	.ROOT	016412-I	E-ERC.DRBL	.ROOT	01642E-I
E-ERC.DRPR	.ROOT	016430-I	E-ERC.DVRS	.ROOT	016428-I
E-ERC.FMSQ	.ROOT	01642C-I	E-ERC.GINI	.ROOT	0163F4-I
E-ERC.IXPR	.ROOT	016430-I	E-ERC.LOG	.ROOT	01641C-I
E-ERC.MENT	.ROOT	016428-I	E-ERC.MFNB	.ROOT	01643C-I
E-ERC.MKOF	.ROOT	01643A-I	E-ERC.MKON	.ROOT	016438-I
E-ERC.MNNB	.ROOT	01643C-I	E-ERC.PERD	.ROOT	016408-I
E-ERC.PFR	.ROOT	016446-I	E-ERC.RECD	.ROOT	0163FE-I
E-ERC.SQDP	.ROOT	016440-I	E-ERC.SQDR	.ROOT	016436-I
E-ERC.SQFL	.ROOT	016434-I	E-ERC.SQNL	.ROOT	016436-I
E-ERC.TQOV	.ROOT	016432-I	E-ERC.TRE2	.ROOT	016446-I
E-ERC.TREN	.ROOT	016446-I	E-ERC.VOL	.ROOT	01643E-I
E-EREGS	.ROOT	0183F0-I	E-ERR.02	.ROOT	026012-I
E-ERR.OB	.ROOT	02603A-I	E-ERR.ASGN	.ROOT	0158F8-I
E-ERR.COM	.ROOT	0158EC-I	E-ERR.COM1	.ROOT	0158F0-I
E-ERR.NB	.ROOT	02600E-I	E-ERRC.F01	.ROOT	0163E0-I
P-ERRC.F01	.ROOT	0163E0-I	E-ERRDU	.ROOT	00B772-I
E-ERROR	.ROOT	00B7E0-I	E-ERRORC	.ROOT	014358-I
E-ERRRECOV	.ROOT	00B77C-I	E-ERRUNREC	.ROOT	00B786-I
E-ESR1MMD	.ROOT	00A2D0-I	E-ESR2MMD	.ROOT	00A314-I
E-ESR3MMD	.ROOT	00A338-I	E-ESR4MMD	.ROOT	00A640-I
E-ESR5MMD	.ROOT	00A6A4-I	E-ESRERS	.ROOT	00B342-I
E-ESRTOUT	.ROOT	00B3A4-I	E-EVCON	.ROOT	0191FC-I
E-EVDIS	.ROOT	0192E0-I	E-EVMOD	.ROOT	01956C-I
P-EVNGEN	.ROOT	000BD0-P	P-EVNGEN	.ROOT	0084C0-I
E-EVQCON	.ROOT	0191F6-I	E-EVREL	.ROOT	019474-I
E-EVRTE	.ROOT	018EC6-I	E-EVT	.ROOT	008530-I
P-EXAC.F01	.ROOT	016450-I	E-EXAC.F01	.ROOT	016450-I
E-EXECMSG	.ROOT	00DA3C-I	E-EXECSRCC	.ROOT	01C95C-I
P-EXIN.F53	.ROOT	002FF0-P	P-EXIN.F53	.ROOT	0164B0-I

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SYMBOL	-- NODE	-- ADDRESS	SYMBOL	-- NODE	-- ADDRESS
E-EXIN.F53	.ROOT	0164B0-I	P-EXIO.F01	.ROOT	018470-I
E-EXIO.F01	.ROOT	018470-I	E-EXLD.F52	.ROOT	019590-I
P-EXLD.F52	.ROOT	019590-I	P-EXMY.F52	.ROOT	01B2D0-I
E-EXMY.F52	.ROOT	01B2D0-I	P-EXSP.F53	.ROOT	01B910-I
E-EXSP.F53	.ROOT	01B910-I	P-EXSV.F52	.ROOT	01CC30-I
E-EXSV.F52	.ROOT	01CC30-I	E-EXTI.F01	.ROOT	01EA00-I
P-EXTI.F01	.ROOT	0032B0-P	P-EXTI.F01	.ROOT	01EA00-I
P-EXTM.F52	.ROOT	01F860-I	E-EXTM.F52	.ROOT	01F860-I
E-FDCHECK	.ROOT	026B14-I	E-FDERROR	.ROOT	012FC0-I
E-FFILE	.ROOT	00FC22-I	E-FFM	.ROOT	00AF4C-I
E-FIRECMD	.ROOT	00B494-I	E-FIREIO	.ROOT	00B43A-I
E-FLTP	.ROOT	020594-I	P-FLTP.F04	.ROOT	020580-I
E-FLTP.F04	.ROOT	020580-I	E-FLTPDEBUG	.ROOT	021A98-I
E-FLTPFLAG	.ROOT	01529C-I	E-FMCO.F33	.ROOT	021AA0-I
P-FMCO.F33	.ROOT	021AA0-I	E-FMERRLV	.ROOT	0163F4-I
E-FMIN.F33	.ROOT	022280-I	P-FMIN.F33	.ROOT	022280-I
P-FMNB.F33	.ROOT	023010-I	E-FMNB.F33	.ROOT	023010-I
P-FMS7.F34	.ROOT	023940-I	E-FMS7.F34	.ROOT	023940-I
P-FMUT.F33	.ROOT	026430-I	E-FMUT.F33	.ROOT	026430-I
E-FORMERR	.ROOT	01580A-I	E-FORREC	.ROOT	00FC28-I
E-FSR	.ROOT	00ACD2-I	E-FSRPRIM	.ROOT	00AD06-I
E-GENBUF05	.ROOT	016355-I	E-GENBUF06	.ROOT	016356-I
E-GENBUF07	.ROOT	016357-I	E-GENBUF08	.ROOT	016358-I
E-GENBUF09	.ROOT	016359-I	E-GENBUF10	.ROOT	01635A-I
E-GENBUF11	.ROOT	01635B-I	E-GENBUF12	.ROOT	01635C-I
E-GENBUF13	.ROOT	01635D-I	E-GENBUF14	.ROOT	01635E-I
E-GENBUF15	.ROOT	01635F-I	E-GENBUF16	.ROOT	016360-I
E-GENBUF17	.ROOT	016361-I	E-GENBUF18	.ROOT	016362-I
E-GENBUF19	.ROOT	016363-I	E-GENBUF20	.ROOT	016364-I
E-GENBUF21	.ROOT	016365-I	E-GENBUF22	.ROOT	016366-I
E-GENBUF23	.ROOT	016367-I	E-GENBUF24	.ROOT	016368-I
E-GENBUF25	.ROOT	016369-I	E-GENBUF26	.ROOT	01636A-I
E-GENBUF27	.ROOT	01636B-I	E-GENBUF28	.ROOT	01636C-I
E-GENBUF29	.ROOT	01636D-I	E-GENBUF30	.ROOT	01636E-I
E-GENBUF31	.ROOT	01636F-I	E-GENBUF32	.ROOT	016370-I
E-GENBUF33	.ROOT	016371-I	E-GENBUF34	.ROOT	016372-I
E-GENBUF35	.ROOT	016373-I	E-GENBUF36	.ROOT	016374-I
E-GENBUF37	.ROOT	016375-I	E-GENBUF38	.ROOT	016376-I
E-GENBUF39	.ROOT	016377-I	E-GENBUF40	.ROOT	016378-I
E-GENBUF41	.ROOT	016379-I	E-GENBUF42	.ROOT	01637A-I
E-GENBUF43	.ROOT	01637B-I	E-GENBUF44	.ROOT	01637C-I
E-GENBUF45	.ROOT	01637D-I	E-GENBUF46	.ROOT	01637E-I
E-GENBUF47	.ROOT	01637F-I	E-GENBUF48	.ROOT	016380-I
E-GENBUF49	.ROOT	016381-I	E-GENBUF50	.ROOT	016382-I
E-GENBUF51	.ROOT	016383-I	E-GENBUF52	.ROOT	016384-I
E-GENBUF53	.ROOT	016385-I	E-GENBUF54	.ROOT	016386-I
E-GENBUF55	.ROOT	016387-I	E-GENBUF56	.ROOT	016388-I
E-GENBUF57	.ROOT	016389-I	E-GENBUF58	.ROOT	01638A-I

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SYMBOL	-- NODE	-- ADDRESS	SYMBOL	-- NODE	-- ADDRESS
E-GENBUF59	.ROOT	01638B-I	E-GENBUF60	.ROOT	01638C-I
E-GENBUF61	.ROOT	01638D-I	E-GENBUF62	.ROOT	01638E-I
E-GENBUF63	.ROOT	01638F-I	E-GENBUF64	.ROOT	016390-I
E-GENBUF65	.ROOT	016391-I	E-GENBUF66	.ROOT	016392-I
E-GENBUF67	.ROOT	016393-I	E-GENBUF68	.ROOT	016394-I
E-GENBUF69	.ROOT	016395-I	E-GENBUF70	.ROOT	016396-I
E-GENBUF71	.ROOT	016397-I	E-GENBUF72	.ROOT	016398-I
E-GENBUF73	.ROOT	016399-I	E-GENBUF74	.ROOT	01639A-I
E-GENBUF75	.ROOT	01639B-I	E-GENBUFF	.ROOT	016350-I
E-GENXLATE	.ROOT	00D6F4-I	E-GETBUFCH	.ROOT	00D20C-I
E-GETBUFF	.ROOT	00D0A4-I	E-GETC	.ROOT	028A9E-I
E-GETCPH	.ROOT	02900E-I	E-GETD	.ROOT	026F94-I
E-GETFCB	.ROOT	01B45C-I	E-GETFRAC	.ROOT	0139CE-I
E-GETIOB	.ROOT	018FF0-I	E-GETMEM	.ROOT	01B56C-I
E-GETSDE	.ROOT	01B69A-I	E-GETSECTR	.ROOT	0265FC-I
E-GETSTSYP	.ROOT	01B6B4-I	E-GETSYP	.ROOT	01B6BC-I
E-GETTCB	.ROOT	01B676-I	E-GETTQE	.ROOT	01B410-I
E-GETUREG	.ROOT	01EFA2-I	E-GETZERO	.ROOT	01B554-I
E-GOPULL	.ROOT	00B666-I	E-GOWAIT	.ROOT	00B716-I
E-H1EEXIT	.ROOT	0189F4-I	E-H1NCON	.ROOT	0188E6-I
E-HOLDTIME	.ROOT	016480-I	E-IFLVL	.ROOT	013D88-I
E-IIH	.ROOT	016570-I	E-III	.ROOT	0032BC-P
E-INDEXC	.ROOT	0222E6-I	E-INDXIOH	.ROOT	022294-I
E-INITBIOC	.ROOT	008EA0-I	P-INITBIOC	.ROOT	000E80-P
P-INITBIOC	.ROOT	008EA0-I	E-INITCARD	.ROOT	00C370-I
P-INITCARD	.ROOT	002CC0-P	P-INITCARD	.ROOT	00C370-I
E-INITCMD	.ROOT	008E9C-I	P-INITFLPY	.ROOT	0023A0-P
P-INITFLPY	.ROOT	00A750-I	E-INITFLPY	.ROOT	00A750-I
E-INITLPTR	.ROOT	00C5D0-I	P-INITLPTR	.ROOT	002FF0-P
P-INITLPTR	.ROOT	00C5D0-I	E-INITM62E	.ROOT	00B8E0-I
P-INITM62E	.ROOT	002880-P	P-INITM62E	.ROOT	00B8E0-I
E-INITMAGS	.ROOT	00A880-I	P-INITMAGS	.ROOT	0025D0-P
P-INITMAGS	.ROOT	00A880-I	E-INITMHD	.ROOT	009870-I
P-INITMHD	.ROOT	002170-P	P-INITMHD	.ROOT	009870-I
P-INITMMD	.ROOT	002260-P	P-INITMMD	.ROOT	009DD0-I
E-INITMMD	.ROOT	009DD0-I	E-INITMTST	.ROOT	028102-I
E-INITRA29	.ROOT	00C4D0-I	P-INITRA29	.ROOT	00C4D0-I
E-INITSUBS	.ROOT	00CF50-I	P-INITSUBS	.ROOT	002FC0-P
P-INITSUBS	.ROOT	00CF50-I	E-INITVFCS	.ROOT	00C9C8-I
P-INITVFCS	.ROOT	00C9B0-I	P-INTC.F01	.ROOT	027590-I
E-INTC.F01	.ROOT	027590-I	E-INTERCPT	.ROOT	0275B0-I
E-INX.CINX	.ROOT	022D94-I	E-INX.FORL	.ROOT	022C3E-I
E-INX.READ	.ROOT	022BDA-I	E-INX.ZBUF	.ROOT	022BAC-I
E-IODCOM	.ROOT	018FB0-I	E-IODCOM2	.ROOT	018FE4-I
E-IODGST	.ROOT	0193CC-I	E-IODGST2	.ROOT	01940E-I
E-IODONE	.ROOT	018F9C-I	E-IODONE2	.ROOT	018F9C-I
E-IODTWT	.ROOT	019416-I	E-IODTWT2	.ROOT	019452-I
E-IOEMSG	.ROOT	015FFC-I	E-IOERR	.ROOT	015856-I

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SYMBOL	-- NODE	-- ADDRESS	SYMBOL	-- NODE	-- ADDRESS
E-IOH6250	.ROOT	00B804-I	E-IOHCDVR	.ROOT	00DE4C-I
E-IOHLP	.ROOT	00C95C-I	E-IOSETCC	.ROOT	018EA0-I
E-IPAUSCHK	.ROOT	0275B8-I	E-IRBUFFER	.ROOT	0143BA-I
E-IRDRINIT	.ROOT	0143C8-I	E-IREADER	.ROOT	0143C4-I
E-ISH	.ROOT	0166B8-I	E-ISHRS	.ROOT	016692-I
E-ISPTAB	.ROOT	0000D0-P	E-ISR1MMD	.ROOT	002260-P
E-ISR2MMD	.ROOT	002280-P	E-ISR3MMD	.ROOT	002310-P
E-ISR4MMD	.ROOT	002348-P	E-ISRCOM	.ROOT	0027AE-P
E-ISRERS	.ROOT	002782-P	E-ISREXIT	.ROOT	0027D8-P
E-ISRLEAVE	.ROOT	00CF74-I	E-ISRLFC	.ROOT	0032B6-P
E-ISRLPTR	.ROOT	002EF0-P	E-ISRM62E	.ROOT	002880-P
E-ISRMAG1	.ROOT	0025D0-P	E-ISRPCIC	.ROOT	0032B0-P
E-ISRTOUT	.ROOT	00CF68-I	E-ISSUEIO	.ROOT	022B30-I
E-IT.ALLOC	.ROOT	028FF4-I	E-IT.CAP	.ROOT	029000-I
E-IT.CHKPT	.ROOT	029000-I	E-IT.CLOSE	.ROOT	029000-I
E-IT.DELET	.ROOT	028FF4-I	E-IT.FETCH	.ROOT	029000-I
E-IT.OPEN	.ROOT	028FEE-I	E-IT.ORJE	.ROOT	029000-I
E-IT.RSLU	.ROOT	02900C-I	E-ITAMCNT	.ROOT	029020-I
E-ITAMFREQ	.ROOT	01F7FA-I	E-ITAMTIMC	.ROOT	029020-I
E-ITEMTLF	.ROOT	029020-I	E-ITFM.M00	.ROOT	028FD0-I
P-ITFM.M00	.ROOT	028FD0-I	E-ITM.FREQ	.ROOT	01F7FC-I
E-IVTEL	.ROOT	008DF4-I	E-JOBFLAG	.ROOT	013D8C-I
E-JOBIFLVL	.ROOT	013D8A-I	E-JOBSKIP	.ROOT	013D8E-I
E-JOURNAL	.ROOT	01C9E0-I	E-LEAFCON	.ROOT	01910A-I
E-LEAFQ	.ROOT	0190DA-I	E-LF.FIRST	.ROOT	008530-I
E-LF.LAST	.ROOT	008C68-I	E-LF11300	.ROOT	0086E8-I
E-LF3900	.ROOT	008530-I	E-LF3901	.ROOT	008690-I
E-LF4900	.ROOT	008848-I	E-LF5100	.ROOT	0088CC-I
E-LF5200	.ROOT	0089A8-I	E-LF5500	.ROOT	008714-I
E-LF6400	.ROOT	0087F0-I	E-LF6500	.ROOT	00881C-I
E-LF9600	.ROOT	0086BC-I	E-LFCON	.ROOT	008530-I
E-LFCR	.ROOT	0086BC-I	E-LFCRT	.ROOT	008690-I
E-LFDSCO	.ROOT	008848-I	E-LFDSC1	.ROOT	0088CC-I
E-LFDSC3	.ROOT	0089A8-I	E-LFFLP1	.ROOT	008714-I
E-LFMAG1	.ROOT	0087F0-I	E-LFMAG2	.ROOT	00881C-I
E-LFPR	.ROOT	0086E8-I	E-LFSET	.ROOT	00D648-I
E-LGMBUFF	.ROOT	003FAC-I	E-LIKSTACK	.ROOT	00A978-I
E-LOAD.SRF	.ROOT	0195A4-I	E-LOADER	.ROOT	013D92-I
E-LOADIMG	.ROOT	0195F4-I	E-LOADLV	.ROOT	008638-I
E-LOADSEG	.ROOT	01AF94-I	E-LOADTASK	.ROOT	0196D0-I
E-LOGCKCNT	.ROOT	014C74-I	E-LOGCKPTI	.ROOT	014C72-I
E-LOGFLAG	.ROOT	014C70-I	E-LUCHECK	.ROOT	026C50-I
E-LUERROR	.ROOT	012DD6-I	E-LUTST	.ROOT	00EE2A-I
E-MAKEXFNM	.ROOT	026F40-I	E-MARK	.ROOT	01310A-I
E-MAXLNTH	.ROOT	00D06E-I	P-MCHK.F02	.ROOT	0275C0-I
E-MCHK.F02	.ROOT	0275C0-I	E-MCONFIG	.ROOT	0163F4-I
E-MDISKINI	.ROOT	018C14-I	E-MEMCHK2	.ROOT	02791A-I
E-MEMCHKER	.ROOT	0279F0-I	E-MEMERLV	.ROOT	0163F4-I

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SYMBOL	-- NODE	-- ADDRESS	SYMBOL	-- NODE	-- ADDRESS
E-MEMERR	.ROOT	01235A-I	E-MEMFAULT	.ROOT	016680-I
E-MEMFLTRS	.ROOT	0165F0-I	E-MEMONOFF	.ROOT	0275D4-I
E-MEMORY	.ROOT	012224-I	E-MER.CNCL	.ROOT	0163F8-I
E-MER.LOG	.ROOT	016426-I	E-MER.RSCH	.ROOT	0163F4-I
E-MER.SCHD	.ROOT	0163F4-I	E-MERD.CNF	.ROOT	0163F4-I
E-MERD.STA	.ROOT	0163F4-I	E-MERD.TEF	.ROOT	0163F4-I
E-MKOFMEM	.ROOT	027ED2-I	E-MMASREG	.ROOT	000BD0-P
E-MMDIOH	.ROOT	00A6E0-I	E-MMH	.ROOT	016D48-I
E-MNMFIND	.ROOT	0159C6-I	E-MOFFBLK	.ROOT	00FE94-I
E-MONBLK	.ROOT	00FFF6-I	E-MOVE	.ROOT	02732C-I
E-MOVE1	.ROOT	027538-I	E-MOVENULL	.ROOT	02754E-I
E-MSG	.ROOT	028A6E-I	E-MSGLOG	.ROOT	015A68-I
E-MTMRPTNS	.ROOT	01DEE0-I	E-MTPRCVRB	.ROOT	00B7B2-I
E-MTPTOUT	.ROOT	00B7A6-I	E-MTPUNCVR	.ROOT	00B79A-I
E-NBF.CINX	.ROOT	023532-I	E-NBF.FORL	.ROOT	023674-I
E-NBF.POSN	.ROOT	0235B6-I	E-NBUFF00	.ROOT	023068-I
E-NBUFFIOH	.ROOT	023024-I	E-NOPRERR	.ROOT	011F28-I
E-NSEVREL	.ROOT	019474-I	E-NULLIOH	.ROOT	018E8C-I
E-OPD.NRJE	.ROOT	023FC8-I	E-OPEN.DEV	.ROOT	023E00-I
E-OPN.BDSK	.ROOT	023DA8-I	E-OPTIONS	.ROOT	012374-I
E-OS.END	.ROOT	029164-I	E-OS.PATCH	.ROOT	029044-I
E-PANIC	.ROOT	0283E4-I	E-PARMERR	.ROOT	015812-I
E-PAUSE	.ROOT	012B7C-I	E-PICADDR	.ROOT	015282-I
E-PICESR	.ROOT	01F43E-I	E-PICLV	.ROOT	0085E0-I
E-PREPRO	.ROOT	015ABC-I	E-PROMODE	.ROOT	013D90-I
E-PSWSAV	.ROOT	01B2B8-I	E-PTRSTACK	.ROOT	003AF4-I
E-PUR.SCAN	.ROOT	01A938-I	E-PUTB	.ROOT	0269A8-I
E-PUTD	.ROOT	027008-I	E-PWLV	.ROOT	0085B4-I
E-RDSELCH	.ROOT	00CFC0-I	E-READ	.ROOT	011FBE-I
E-READCMDF	.ROOT	0120C2-I	E-REGBIAS	.ROOT	000DD8-P
E-REGS	.ROOT	00B484-I	E-REL.MASK	.ROOT	017A88-I
E-RELEB	.ROOT	026A26-I	E-RELEFCB	.ROOT	01B4E4-I
E-RELIOB	.ROOT	019022-I	E-RELMEM	.ROOT	01B5CC-I
E-RELPST	.ROOT	01AF30-I	E-RELSDE	.ROOT	01B6AC-I
E-RELSYP	.ROOT	01B7E2-I	E-RELTCB	.ROOT	01B68C-I
E-RELTCB1	.ROOT	01B690-I	E-RELTQE	.ROOT	01B42C-I
E-REMOVE	.ROOT	014228-I	E-REPROTEC	.ROOT	012D5A-I
E-RESET	.ROOT	025864-I	E-RESET.IN	.ROOT	022DB6-I
E-RESET.NB	.ROOT	0237A6-I	E-RESET.RW	.ROOT	025864-I
E-RESETAB	.ROOT	00D376-I	E-RESETBTS	.ROOT	00D3BC-I
E-REWIND	.ROOT	00FC3A-I	E-REWINDT	.ROOT	00ACA0-I
E-ROERMSG	.ROOT	01B8A8-I	E-ROERMSG	.ROOT	01B8E3-I
E-ROERNAME	.ROOT	01B8C8-I	E-ROERSTYP	.ROOT	01B8E0-I
E-ROERTYPE	.ROOT	01B8B8-I	E-ROLLPRIO	.ROOT	01FA72-I
E-RSTVT	.ROOT	00D448-I	E-RSTVTALL	.ROOT	00D440-I
E-RVOLUME	.ROOT	010AF4-I	E-SCANNER	.ROOT	0159AC-I
E-SCTH	.ROOT	000000-A	E-SCTT	.ROOT	000000-A
E-SECTORBF	.ROOT	011C18-I	E-SEEKCHK	.ROOT	0190D6-I

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SYMBOL	-- NODE	-- ADDRESS	SYMBOL	-- NODE	-- ADDRESS
E-SEEKPOS	.ROOT	0190CC-I	E-SEG.ADD	.ROOT	01A6A6-I
E-SEG.DIS	.ROOT	01ADA2-I	E-SEG.RMV	.ROOT	01A7F4-I
E-SEG.SCAN	.ROOT	01A93E-I	E-SEGTYPE	.ROOT	01B8E4-I
E-SEND	.ROOT	0133B0-I	E-SEQERR	.ROOT	0121B8-I
E-SET	.ROOT	01243E-I	E-SET.LRCL	.ROOT	0272FC-I
E-SETBUFF	.ROOT	00D0B0-I	E-SETDELAY	.ROOT	01E2B6-I
E-SEHTAB	.ROOT	00D216-I	E-SETISP	.ROOT	00D07E-I
E-SETISPS	.ROOT	00D090-I	E-SETLU	.ROOT	015942-I
E-SETTOUT	.ROOT	0027EA-P	E-SETUTOP	.ROOT	01E258-I
E-SETVTAB	.ROOT	00D27C-I	E-SF000	.ROOT	008DC8-I
E-SLICELV	.ROOT	00860C-I	E-SPOLFILE	.ROOT	00E006-I
E-SPSET	.ROOT	00D6A0-I	E-SPT		000060-A
E-SPT.60	.ROOT	003316-I	E-SPT.ADCK	.ROOT	003354-I
E-SPT.ADDM	.ROOT	00342C-I	E-SPT.ADK1	.ROOT	003358-I
E-SPT.AFSV	.ROOT	0033AC-I	E-SPT.CHBK	.ROOT	0032EC-I
E-SPT.CLSS	.ROOT	00334C-I	E-SPT.CPID	.ROOT	00343C-I
E-SPT.CPIE	.ROOT	003440-I	E-SPT.CPU	.ROOT	00333E-I
E-SPT.CRSR	.ROOT	0032D6-I	E-SPT.CSBF	.ROOT	0032E8-I
E-SPT.CSLV	.ROOT	0032E4-I	E-SPT.CTCB	.ROOT	0033EC-I
E-SPT.CTOP	.ROOT	0032F0-I	E-SPT.CTSP	.ROOT	0032E2-I
E-SPT.DATE	.ROOT	00336C-I	E-SPT.DAY	.ROOT	00336E-I
E-SPT.DFOW	.ROOT	003404-I	E-SPT.DMT	.ROOT	003318-I
E-SPT.DTHD	.ROOT	003378-I	E-SPT.EDMA	.ROOT	0033E0-I
E-SPT.EFOW	.ROOT	003400-I	E-SPT.EMHD	.ROOT	0033E4-I
E-SPT.EMTL	.ROOT	0033E8-I	E-SPT.ERBL	.ROOT	003464-I
E-SPT.ESOW	.ROOT	0033F8-I	E-SPT.FLST	.ROOT	0033C8-I
E-SPT.FLV	.ROOT	0032D8-I	E-SPT.FREQ	.ROOT	003338-I
E-SPT.FSYP	.ROOT	0033CC-I	E-SPT.HLDA	.ROOT	00341C-I
E-SPT.HLDB	.ROOT	003420-I	E-SPT.INIT	.ROOT	0032D0-I
E-SPT.IPID	.ROOT	003462-I	E-SPT.IQHD	.ROOT	003380-I
E-SPT.ISPT	.ROOT	0032EE-I	E-SPT.IVT	.ROOT	00330C-I
E-SPT.JRNL	.ROOT	003334-I	E-SPT.LFC	.ROOT	00333C-I
E-SPT.LLV	.ROOT	0032DC-I	E-SPT.MCOW	.ROOT	0033FC-I
E-SPT.MISS	.ROOT	003444-I	E-SPT.MLBL	.ROOT	0032E0-I
E-SPT.MNTH	.ROOT	00336C-I	E-SPT.MTM	.ROOT	003314-I
E-SPT.MTOP	.ROOT	003300-I	E-SPT.NODE	.ROOT	003448-I
E-SPT.NTCB	.ROOT	003315-I	E-SPT.OFFM	.ROOT	003430-I
E-SPT.OSID	.ROOT	003304-I	E-SPT.OSUP	.ROOT	003394-I
E-SPT.PAGE	.ROOT	003424-I	E-SPT.PAGM	.ROOT	003434-I
E-SPT.PANC	.ROOT	003398-I	E-SPT.PIC	.ROOT	00333A-I
E-SPT.PID	.ROOT	003460-I	E-SPT.PMEM	.ROOT	0032FC-I
E-SPT.PSDD	.ROOT	003450-I	E-SPT.PSDT	.ROOT	003454-I
E-SPT.PSV	.ROOT	00339C-I	E-SPT.QH	.ROOT	003458-I
E-SPT.RDCB	.ROOT	0033D8-I	E-SPT.RLIO	.ROOT	003410-I
E-SPT.RSOF	.ROOT	00340C-I	E-SPT.RSON	.ROOT	003408-I
E-SPT.RSOW	.ROOT	0033F4-I	E-SPT.RSV	.ROOT	0033A4-I
E-SPT.RTCB	.ROOT	0033D4-I	E-SPT.RTLS	.ROOT	003384-I
E-SPT.RVOL	.ROOT	003328-I	E-SPT.SCL	.ROOT	0033C4-I

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SYMBOL	-- NODE	-- ADDRESS	SYMBOL	-- NODE	-- ADDRESS
E-SPT.SCLP	.ROOT	003428-I	E-SPT.SCTH	.ROOT	00338C-I
E-SPT.SCTT	.ROOT	003390-I	E-SPT.SEGM	.ROOT	003438-I
E-SPT.SNOD	.ROOT	003330-I	E-SPT.SOPT	.ROOT	003340-I
E-SPT.SPCT	.ROOT	0033DC-I	E-SPT.SPVL	.ROOT	003324-I
E-SPT.SSTE	.ROOT	003350-I	E-SPT.SSTS	.ROOT	003352-I
E-SPT.STCB	.ROOT	003480-I	E-SPT.SVOL	.ROOT	003320-I
E-SPT.TCMS	.ROOT	003388-I	E-SPT.TID	.ROOT	00345C-I
E-SPT.TIME	.ROOT	003374-I	E-SPT.TQHD	.ROOT	00337C-I
E-SPT.TSL	.ROOT	003372-I	E-SPT.TSV	.ROOT	0033A8-I
E-SPT.TTAB	.ROOT	003310-I	E-SPT.TVOL	.ROOT	00332C-I
E-SPT.UBOT	.ROOT	0032F8-I	E-SPT.UTCB	.ROOT	013D70-I
E-SPT.UTOP	.ROOT	0032F4-I	E-SPT.UTOW	.ROOT	0033F0-I
E-SPT.VALU	.ROOT	003418-I	E-SPT.VERN	.ROOT	003344-I
E-SPT.VMT	.ROOT	00331C-I	E-SPT.YEAR	.ROOT	003370-I
P-SPTINIT	.ROOT	000000-P	P-SPTINIT	.ROOT	0032D0-I
E-SPTTAG	.ROOT	003508-I	E-SQ	.ROOT	008E1C-I
E-SQS	.ROOT	018ECC-I	E-SQS.EX	.ROOT	018EC6-I
E-SQS.MLV	.ROOT	018F62-I	E-SQS.SLV	.ROOT	018F4E-I
E-SQS.TIME	.ROOT	018F2C-I	E-SQS.TSL	.ROOT	018F40-I
E-SQS2DISP	.ROOT	017678-I	E-START	.ROOT	011DDC-I
E-STATUS	.ROOT	00B3CC-I	E-STRTINTC	.ROOT	0275B0-I
E-SUBCKRPT	.ROOT	01DE78-I	E-SUBRPORT	.ROOT	01DE7A-I
E-SUBRPTNS	.ROOT	01DED6-I	E-SV1ADER1	.ROOT	01868A-I
E-SV1ERTB	.ROOT	015FA8-I	E-SV1FCER	.ROOT	018A72-I
E-SV3.TERM	.ROOT	01CC54-I	E-SV4.ENAC	.ROOT	016490-I
E-SV4.ERR3	.ROOT	01D38E-I	E-SV4.NEXT	.ROOT	01D374-I
E-SV4.RDAC	.ROOT	016490-I	E-SV4.RMAW	.ROOT	016490-I
E-SV4ICONT	.ROOT	0275A4-I	E-SV4ICRSP	.ROOT	0275A4-I
E-SV4ICRTE	.ROOT	0275A4-I	E-SV4IGET	.ROOT	0275A4-I
E-SV4IPROC	.ROOT	0275A4-I	E-SV4IPUT	.ROOT	0275A4-I
E-SV4IREMV	.ROOT	0275A4-I	E-SV4IROLL	.ROOT	0275A4-I
E-SV4ITERM	.ROOT	0275A4-I	E-SV4ITRAP	.ROOT	0275A4-I
E-SV6ERCD	.ROOT	01D58C-I	E-SV6ERTB	.ROOT	01D5B0-I
E-SV7.CMD	.ROOT	023AFC-I	E-SV9.ASQ	.ROOT	01F884-I
E-SV9.ASQ1	.ROOT	01F87E-I	E-SV9.ATQ	.ROOT	01F87A-I
E-SV9.ATQ1	.ROOT	01F874-I	E-SV9.STSW	.ROOT	01F9AE-I
E-SV9.TSWN	.ROOT	01F9A8-I	E-SVC1	.ROOT	018484-I
E-SVC1.0	.ROOT	018486-I	E-SVC10	.ROOT	01E5D4-I
E-SVC14	.ROOT	01D20A-I	E-SVC15	.ROOT	028FE2-I
E-SVC1BFM	.ROOT	018722-I	E-SVC1BSR	.ROOT	018722-I
E-SVC1DDF	.ROOT	018722-I	E-SVC1EXIT	.ROOT	018A0C-I
E-SVC1FFM	.ROOT	018722-I	E-SVC1FSR	.ROOT	018722-I
E-SVC1HALT	.ROOT	018890-I	E-SVC1IA	.ROOT	018AD6-I
E-SVC1INA	.ROOT	018AD0-I	E-SVC1NIA	.ROOT	018ADE-I
E-SVC1NINA	.ROOT	018AEC-I	E-SVC1NOOP	.ROOT	018A90-I
E-SVC1READ	.ROOT	0186E4-I	E-SVC1REW	.ROOT	018722-I
E-SVC1TEST	.ROOT	018834-I	E-SVC1WAIT	.ROOT	018798-I
E-SVC1WFM	.ROOT	018722-I	E-SVC1WRIT	.ROOT	0186E4-I

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SYMBOL	-- NODE	-- ADDRESS	SYMBOL	-- NODE	-- ADDRESS
E-SVC2	.ROOT	01B924-I	E-SVC2.10	.ROOT	01EBAA-I
E-SVC2.11	.ROOT	01EBAE-I	E-SVC2.14	.ROOT	0143B4-I
E-SVC2.2	.ROOT	01B2E4-I	E-SVC2.20	.ROOT	01B3D0-I
E-SVC2.21	.ROOT	01B3DC-I	E-SVC2.23	.ROOT	01EBC4-I
E-SVC2.24	.ROOT	01648A-I	E-SVC2.25	.ROOT	01648A-I
E-SVC2.3	.ROOT	01B394-I	E-SVC2.7	.ROOT	00D914-I
E-SVC2.8	.ROOT	01EA14-I	E-SVC2.9	.ROOT	01EB0E-I
E-SVC3	.ROOT	01CC44-I	E-SVC4	.ROOT	01D22E-I
E-SVC5	.ROOT	01D3FA-I	E-SVC6	.ROOT	01D6B0-I
E-SVC7	.ROOT	023954-I	E-SVC7PBLK	.ROOT	00F6DC-I
E-SVC9	.ROOT	01D162-I	E-SYSINIT	.ROOT	0176DA-I
E-TABSCAN	.ROOT	00D1E2-I	E-TASK	.ROOT	012734-I
E-TASKERR	.ROOT	011D8C-I	E-TCBLOOK	.ROOT	01A670-I
E-TCBLOOK2	.ROOT	01A672-I	E-TCBTAB	.ROOT	00347C-I
E-TCOM	.ROOT	014300-I	E-TCPU.TCB	.ROOT	016474-I
E-TCPU.TIM	.ROOT	01646C-I	E-TCPU.TYP	.ROOT	016478-I
E-TEMPFILE	.ROOT	00DEA6-I	E-TERM	.ROOT	01C306-I
E-TERM1	.ROOT	01C30C-I	E-TERMBIOC	.ROOT	009394-I
E-TERMCCHK	.ROOT	0159BA-I	E-TERMFLP	.ROOT	00A830-I
E-TERMLPTR	.ROOT	00C87E-I	E-TERMM62E	.ROOT	00BA42-I
E-TERMMAGS	.ROOT	00A9FC-I	E-TERMMHD	.ROOT	009A70-I
E-TERMMMD	.ROOT	00A2D0-I	E-TERMNCRD	.ROOT	00C4A4-I
E-TESTPRT	.ROOT	016336-I	E-TESTRDY	.ROOT	00B544-I
E-TESTRS	.ROOT	025BFC-I	E-TESTVFC	.ROOT	00D0BA-I
E-TICAN	.ROOT	01F188-I	E-TICAN1	.ROOT	01F18C-I
E-TIFXTCHN	.ROOT	01F27C-I	E-TIMELV	.ROOT	008588-I
E-TIMEOUT	.ROOT	01C9E4-I	E-TIMERR	.ROOT	015924-I
E-TIMESR	.ROOT	01F542-I	E-TM.FEB	.ROOT	01F7E7-I
E-TM.FREQ	.ROOT	01F7E4-I	E-TM30DAYS	.ROOT	01F7E5-I
E-TMCHN	.ROOT	0204BC-I	E-TMCPUOFF	.ROOT	016464-I
E-TMCPUON	.ROOT	016466-I	E-TMDISP	.ROOT	01FA60-I
E-TMNSOUT	.ROOT	02010C-I	E-TMRD.MAC	.ROOT	01FB72-I
E-TMRDISP	.ROOT	01FA74-I	E-TMREMW	.ROOT	020444-I
E-TMRSAIN	.ROOT	0201E4-I	E-TMRSABOUT	.ROOT	0203A2-I
E-TMRSARS	.ROOT	0202E6-I	E-TMRSIN	.ROOT	0201FC-I
E-TMRSIN1	.ROOT	0201FC-I	E-TMRSOTNS	.ROOT	020364-I
E-TMRSOUT	.ROOT	020356-I	E-TMRSRSA	.ROOT	020306-I
E-TMSTART	.ROOT	020136-I	E-TMSTOP	.ROOT	02019E-I
E-TMSTOPW	.ROOT	020198-I	E-TMUCHN	.ROOT	020520-I
E-TOCHOFF	.ROOT	01F822-I	E-TOCHON	.ROOT	01F7FE-I
E-TOFBUF	.ROOT	00D644-I	E-TOFLFS	.ROOT	00D647-I
E-TOITAMIO	.ROOT	01957E-I	E-TOPCSRCH	.ROOT	028B66-I
E-UBOT	.ROOT	029164-I	E-UBOT.0	.ROOT	029044-I
E-UBOT.F01	.ROOT	029030-I	P-UBOT.F01	.ROOT	029030-I
E-UNPACK	.ROOT	01C978-I	E-VFC.FFB	.ROOT	00CF48-I
E-VFC.LFB	.ROOT	00CEF8-I	E-VFC.SPB	.ROOT	00CE74-I
E-VFC.VTB	.ROOT	00CF4C-I	E-VFCDIR	.ROOT	00CA16-I
E-VFCIGNOR	.ROOT	00CE00-I	E-VFCLFPIS	.ROOT	00CA08-I



-- IMAGE LINKED AT 14:05:27 ON MARCH 27, 1983 --

SYMBOL	-- NODE	-- ADDRESS	SYMBOL	-- NODE	-- ADDRESS
E-VFCCLFPND	.ROOT	00C9FA-I	E-VFCNEXTA	.ROOT	00CC88-I
E-VFCTLT	.ROOT	00D0C4-I	E-VFUTLT	.ROOT	00D190-I
E-VFUTLTCH	.ROOT	00D1F8-I	E-VMT	.ROOT	0084C0-I
E-VMT.DSC0	.ROOT	0084D4-I	E-VMT.DSC1	.ROOT	0084DC-I
E-VMT.DSC2	.ROOT	0084E4-I	E-VMT.DSC3	.ROOT	0084EC-I
E-VMT.DSC4	.ROOT	0084F4-I	E-VMT.DSC5	.ROOT	0084FC-I
E-VMT.DSC6	.ROOT	008504-I	E-VMT.DSC7	.ROOT	00850C-I
E-VMT.DSC8	.ROOT	008514-I	E-VMT.DSC9	.ROOT	00851C-I
E-VMT.DSCA	.ROOT	008524-I	E-VMT.FLP1	.ROOT	0084C4-I
E-VMT.FLP2	.ROOT	0084CC-I	E-VMTLOOK	.ROOT	027054-I
E-VOLUME	.ROOT	010CD0-I	E-VTBUF	.ROOT	00D6F0-I
E-WAITIO	.ROOT	01876E-I	E-WAITRS	.ROOT	025BAC-I
E-WFILE	.ROOT	00FC1C-I	E-WFM	.ROOT	00AFEA-I
E-WRITE	.ROOT	011F22-I	E-WRITEM	.ROOT	00AA96-I
E-WRTSELRD	.ROOT	00CF7A-I	E-WRTSELWT	.ROOT	00CFA2-I
E-XAIDSBRK	.ROOT	015E44-I	E-XALLOCAT	.ROOT	010FCE-I
E-XDELETE	.ROOT	010F46-I	E-XDMTLOOK	.ROOT	0275B6-I
E-XLTBIOC	.ROOT	00975C-I	E-XLTBIOC2	.ROOT	0097DC-I
E-XLTPECRT	.ROOT	00979C-I	E-XREGS	.ROOT	018430-I
E-XTCBLOOK	.ROOT	0275B6-I			

APPENDIX H  
FORMATTING DISCS FOR USE WITH OS/32

In order to prepare a disc pack for use by OS/32, the pack must be formatted by the stand-alone Common Disc Test/Formatter Program 06-173F02 or the Common Mass Storage Media (MSM) Disc Formatter, 06-201.

Disc packs do not require formatting if they were previously formatted for OS/32 or OS/16. Packs purchased from Perkin-Elmer should not require formatting as they have been formatted prior to shipment. MSM packs should not be formatted unless absolutely necessary.

o To format a 2.5Mb, 10Mb or 40Mb disc, proceed as follows:

1. Mount the pack.
2. Switch the controller FORMAT switch to FMT, and ensure the drive is not write-protected.
3. Enter the following data into the memory locations indicated:

<u>Location</u>	<u>Content</u>
50	D500
52	00CF
54	4300
56	0080
78	1399 (Formatter on Paper Tape)
	85A1 (Formatter on Magnetic Tape)
	0294 (Formatter on TTY Paper Tape Reader)
	45A1 (Formatter on Cassette)

4. Load the Formatter program by placing the Formatter program into the appropriate device and starting execution at location X'50'.
5. Start formatter at address X'A00'.

o Formatting of 2.5, 10, and 40Mb discs

1. The following is output at the console:

```
"COMMON DISC FORMATTER 06-173R00F02"
```

2. Enter the following sequence of commands at the console:

```
*PACTYP 1
*FILE n
*LOCYL 0
*HICYL h
*DISCON c
*TIMCON 140 (for 7/32)
  or
*TIMCON 1A0 (for 8/32)
*FMREAD 2
*DEFSEC 1
*FMTWP 0
*RUN
```

where the values of n, h, and c are reflected by the following table:

	DISC TYPE			
<u>Option</u>	<u>2.5Mb</u>	<u>10Mb Fixed 5</u>	<u>10Mb Removable</u>	<u>40Mb</u>
n	3	1	2	4
h	CA	197	197	195
c	B6	B6	B6	FB

o Formatting of 67 and 256Mb discs

1. Set Format switch on controller to zero, and ensure that the drive is not write-protected.
2. The following is output at the console: "Common MSM Disc Formatter 06-201R00".
3. Enter the following sequence of commands at the console:

```

*PACTYP n      (for 67Mb n=0, for 256Mb n=1)
*LOCYL  0
*HICYL  336
*DRIVE  0
*TIMVAL  t      (7/32)F0
*SELCH  nn     (Default X'F0')
*DISCON nn     (Default X'FB')
*RUN

```

The values for t (TIMVAL) are:

CPU	t
7/32	F0
8/32	1E0
3220	
3240	

Any sector flagged as defective, causes a message to be printed indicating the defective sector.

After formatting, move the controller format switch out of the FMT (0) position.

Once the disc pack has been formatted, it must be initialized.

Disc initialization can be accomplished using the OS/32 Disc Initializer program. An image version of Disc Initializer is included in the package.

o Formatting CDD Discs (form formatted sizes 13.5,40.5,67.5)

1. Set the format switch on the controller to zero and ensure that the drive is not write-protected.

2. The following message is output at the console:

```
"MC CDD DISC FORMATTER 06-262".
```

3. Enter the following sequence of commands at the console:

```

*PACTYP n      n=0 for 13.5Mb removable
                n=1 for 67.5Mb fixed
                n=2 for 40.5Mb fixed
                n=3 for 13.5Mb fixed

*LOCYL  0
*HICYL  336
*DRIVE  0
*SELCH  nn     (Default = X'F0')
*DISCON nn     (Default = X'EB')
*RUN

```